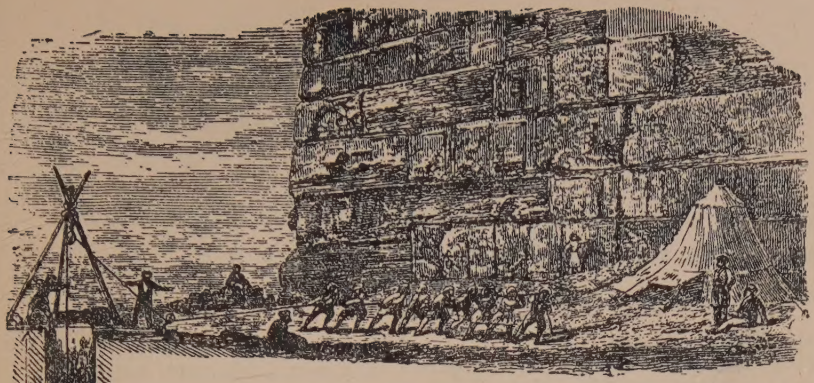

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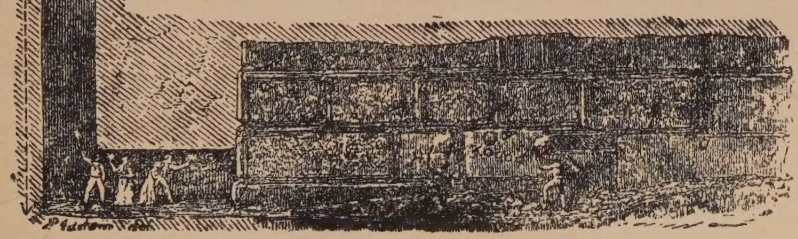

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INDEX TO NAMES OF AUTHORS AND TITLES OF CONTRIBUTIONS

PAGE

Arden-Close, C. F.—
The Rainfall of Palestine 122

Sir Aurel Stein's Explorations of the Roman Frontiers of Iraq and Transjordan 18

Crowfoot, Grace M.—
The Vertical Loom of Palestine and Syria 141

Diringer, D.—
On Ancient Hebrew Inscriptions discovered at Tell ed Duweir (Lachish)—I 38

On Ancient Hebrew Inscriptions discovered at Tell ed Duweir (Lachish)—II 89

Garstang, J.—
The Story of Jericho : Further Light on the Biblical Narrative ... 168

Kirk, George E.—
The Negev, or Southern Desert of Palestine 57

Lucas, A.—
The Date of the Exodus 110

Rapaport, I.—
The Origins of Hebrew Law 158

Ross, W.—
Is Beitin the Bethel of Jeroboam ? 22

Rowley, H. H.—
The Date of the Exodus 152

Smith, Sidney.—
Timber and Brick or Masonry Construction (with an additional note by C. F.-A. Schaeffer) 5

PAGE

REVIEWS :

Arden-Close, C. F.—
Map of Roman Palestine 28

Crowfoot, J. W.—
Explorations in Eastern Palestine III 79
The other side of Jordan 79

FitzGerald, G. M.—
Lachish II (Tell ed Duweir): The Fosse Temple 72

Hyamson, A. M.—
Herbert Bentwich The Pilgrim Father 31
Report of the Department of Agriculture and Fisheries of the Government of Palestine, year ended 31st March, 1940 130
Palestine Industry: Statistical Abstract, 1940 130

Thomas, D. Winton.—
The Bible and Archaeology 30

LIST OF ILLUSTRATIONS

				PAGE
SIR AUREL STEIN'S EXPLORATIONS OF THE ROMAN FRONTIERS IN IRAQ AND TRANSJORDAN—				
PLATE	I.	Sketch Map of Journey in 1939	*after*	20
PLATE	II.	Fig. 1. Roman Bridge over Wadi al Murr, Eski Mosul		
		Fig. 2. Roman Milestone beyond Al Khalida	,,	,,
ON ANCIENT HEBREW INSCRIPTIONS DISCOVERED AT TELL ED-DUWEIR (LACHISH), I—				
PLATE	III.	Private Stamps	,,	38
PLATE	IV.	Incomplete Private Stamps	,,	46
THE NEGEV, OR SOUTHERN DESERT OF PALESTINE—				
PLATE	V.	Map	,,	58
ON ANCIENT HEBREW INSCRIPTIONS DISCOVERED AT TELL ED-DUWEIR (LACHISH)—II—				
PLATE	VI.	Royal Stamps (I)	,,	108
PLATE	VII.	,, ,, (II)	,,	,,
PLATE	VIII.	Seals	,,	,,
PLATE	IX.	The Royal Bat	,,	,,
PLATE	X.	,, ,, ,, Details of Reconstruction	,,	,,
PLATE	XI.	Fig. 1. A Private Stamp	,,	,,
		,, 2. Remains of an Inscription	,,	,,
THE VERTICAL LOOM IN PALESTINE AND SYRIA—				
PLATE	XII.	Fig. 1. Weaver and His Boy, side View ...	,,	151
		Fig. 2. Warping. Hama (Syria), Front View	,,	,,
PLATE	XIII.	Weaver, Hama (Syria):		
		Fig. 1. Heddle Threads Taken for Shed ...	,,	,,
		Fig. 2. Shed Rod. Threads Taken for Shed	,,	,,
PLATE	XIV.	The Vertical Looms—		
		Fig. 1. For the Names of Parts see List on p. 150	,,	,,
		Fig. 2. Diagram of the Method of Warping. See p. 142	,,	,,
PLATE	XV.	Fig. 1. Weaver, Nablus, Beating up with Comb Beater	,,	,,
		Fig. 2. The Comb Beater, Nablus (Palestine)	,,	,,
		Fig. 3. Woven Sacks in Corn Market (Bethlehem)	,,	,,
		Fig. 4. Weaver at Ayasso (Mitylene) ...	,,	,,
		Fig. 5. Girls Spinning at Ayasso (Mitylene)	,,	,,

GENERAL INDEX

Abda, 61.
Aechtungstexte, 88.
Agriculture and Fisheries of Palestine, 130.
Akkadian scripts, 7.
Alalakh, 5.
Al Khalidi, 21.
Amanus, 6.
Aqaba, 20, 61.
Aramaic passage in Ezra VI, 3f, 6.
Arrapkha, 164.
Ashbel's Rainfall map, 122.
Ashur, building construction of, 6.
Atchana, 6.
Auja Hafir, 61.

Bat, the Royal, measure, 105, 107.
Beth-Shan (Beisan), bone tablet from, 87.
brick and wood constructions, 13.
Beitin, is it Jeroboam's Bethel? 22.
Bentwich, Herbert the Pilgrim Father, 31.
Bethel, 22.
Bible and Archaeology, 30, 36.
Burqu, Roman dam at, 20.

Chinese script and Uruk tablets, 4.
Citrus fruits, exports of, 132.
Climate of the Negev, 58.
Conder, C. R. and Bethel, 24.
Crete, Minoan, building constructions, 10.
Crucifixion of Jesus by the Jews, 139.
Cyrus edict in Ezra VI, 3f.

Dickie, Prof. A. C., death of, 140.
Druzes, The, 139.

Eastern Palestine, explorations in, 79.
Elath, ostraca from, 36.
Esdras on the building of the Temple, 14.
Evans, Sir Arthur, death of, 85.
Exodus, date of the, 82, 110, 152, 173.
Ezion Geber, 61, 80.
Ezra and the Cyrus edict, 6.

Fauna of ancient Mesopotamia, 3.
Fisher, Dr. C. S., death of, 140.

Habiru and Tell Amarna letters, 137, 156.
social statue of the, 163.
halalu, meaning of, 8.
Hama, vertical loom at, 141.
Hammurabi Code and laws of slavery, 163.
Hebrew law, the origins of, 158.
slavery, boring of the ear symbol, 165.
Hyksos period and Exodus, 155.

Iraq, Roman frontiers, 18.
Isaiah, study of the Book of, 35.

Jericho, date of the fall of, 114, 154, 170.
the story of, 168.
Jewish burial custom, 87.

Kadesh and the forty years wandering, 157.
Khalasa, 61.
Krappe, A. H., theory of Semitic colonization, 2.
kutlaiya, 7.

Lachish, Hebrew stamps and seals, 35, 38, 87, 89.
ostraka, study of, 36.
The Fosse Temple (review), 72.
Lebanon, timber of the, 6.

Ma'an, old irrigation system, 20.
Mari tablets, the, 88.
Mesopotamian pre-dynastic culture, 86.
mohar, the bride-price, 158.

Nabataean kingdom, the, 62, 82.
Nablus looms, 141.
Negev, geography, climate, antiquities, etc., 129.

Odhrah, 20.

Palestine, Agriculture and Fisheries, 130.
Industry, 130.
map of Roman, 28.
the rainfall of, 122.
Palestine Exploration Quarterly, wartime issues, 137.
Phenician colonization of N. Africa, 2.
Procopius of Caesarea and Semitic migration, 2.

Qasr Azraq, 20.
Qasr el Jahainiya el Qible, 63.
Qasr el Mahalla, 63.
Qasr Khubbaz, 19.
Qweira, 21.

Rainfall map of Palestine, 122, 172.
Rains, *former and latter*, 124.
Ras Shamra and log hut construction, 11.
tablets, 87.

Samaritan Decalogue inscription, 87.
Sbaita excavations, 61.
Seven deadly sins, 138.
Statistical Abstract of Palestine, 1940, 133.
Stein, Sir Aurel's explorations, 18.
Sumer and Akkad, pictorial art of, 3.

Tainat, 6.
Tell ed-Duweir (see Lachish).
Timber and brick or masonry constructions, 5.
Trade and craftsmens' guilds, 87.
Trade routes, ancient, 18.
Transjordan, Prof. Glueck's researches, 79.
Roman frontiers of, 18.

Uruk tablets and Chinese script, 4.

Van Buren, Mrs. E., Studies of Mesopotamian art, 3.
Vertical looms, 141.

Wadi es Swab, 19.
Weaving, ancient and modern looms, 141.

Zionism in Anglo-Jewry, 32.

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CONTENTS

PAGE

NOTES AND NEWS 1

TIMBER AND BRICK OR MASONRY CONSTRUCTION: BY SIDNEY SMITH (with an additional note by C. F.-A. SCHAEFFER) 5

SIR AUREL STEIN'S EXPLORATIONS OF THE ROMAN FRONTIERS IN IRAQ AND TRANSJORDAN 18

IS BEITIN THE BETHEL OF JEROBOAM? BY W. ROSS 22

MAP OF ROMAN PALESTINE 28

REVIEWS AND NOTICES 30

LIST OF ILLUSTRATIONS

PAGE

Sir Aurel Stein's Explorations of the Roman Frontiers in Iraq and Transjordan—

Plate I: Sketch Map of Sir Aurel Stein's Journey in 1939 .. .. .. *after* 20

Plate II. Fig. 1. Roman Bridge over Wadi al Murr, Eski Mosul

Fig. 2. Roman Milestone beyond Al Khalida .. .. ,, ,,

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS

THE editor renews his thanks to those faithful contributors who have made it possible for the QUARTERLY to appear, although reduced in size, during a year unparalelled in the history of this island. We continue to live by faith, in many respects, and as the apostle Paul said, "We are saved by hope." The continuance of the QUARTERLY may well seem a small thing when our survival as a nation is in the balance, but small as it is the QUARTERLY is one of the many lights which make up the beacon-light of a civilization upon whose continued existence we are staking everything we have. For this reason the editor begs again for the help of contributors. Perhaps our friends on the other side of the Atlantic, who are already mobilizing their vast resources of energy and goodwill for our aid in the struggle, may find it in their hearts to remember the needs of the QUARTERLY, and to send us some of the results of those archaeological researches in which they are so eminent.

It will give pleasure to many of our readers to know that Dr. Diringer has been released, and we hope to publish his article in the April issue of the QUARTERLY. Many of our friends who were interned generously recognized the need of the measure, and accepted their sufferings by reason of it as their share in the general suffering which the whole nation is undergoing. But the necessity of the measure was no excuse for the manner of its execution.

In the July issue of the *American Journal of Semitic Languages and Literatures* there appears a very interesting and

provocative article in French by Dr. A. H. Krappe, entitled "Les Chananéens dans l'ancienne Afrique du nord et en Espagne." The learned author's contention should certainly elicit comment from competent historians and archaeologists, and the epigraphists will have a word to say on the subject. Dr. Krappe's theory is that Phenicia was too sparsely populated in the second millennium B.C. to have been able to colonize so vast a region as northern Africa, even in its most flourishing period, the age of Hiram the friend and ally of Solomon. He points out that if Tyre succeeded in founding Carthage it was because Carthage was not properly speaking a new colony. The success of the venture is to be explained rather by the fact that the Tyrians found a Semitic population already long settled in Africa. The further fact that the Semitic tongue of northern Africa, Punic, survived the fall of Carthage and even of the Roman Empire suggests a density and homogeneity of population which can only be explained by the hypothesis of a pre-historic Semitic invasion analogous to the Arab invasion in the seventh century A.D. Now such a Semitic invasion actually did take place in the course of the third millennium and during the first part of the second millennium B.C., when Mesopotamia, Syria, Judaea and even Egypt received Semitic populations. There is not the smallest reason to suppose that this migration stopped short in the Nile valley, any more than did the Arab invasion in the time of the first Caliphs. On the contrary everything points to the belief that Semitic tribes overran Tunis, Algiers, and perhaps Spain, as the Arabs did three millenniums later. The Phenician colonists were only the latest of the Semitic populations, before the Moslem conquest, to reach Africa. So far Dr. Krappe has been stating the views of Winkler and Landau, but he goes on to say that the hypothesis rests entirely upon analogy, and, as put forward by these scholars, is unsupported by documentary evidence. He then proceeds to offer certain evidence and to discuss its historical value. The first evidence is that of the sixth century historian Procopius of Caesarea. Procopius records the tradition that at the time of the Hebrew invasion of Palestine the native populations, unable to resist the invaders, migrated westwards, and being unable to find a resting-place in Egypt, pushed on into Libya, settling the country as far as the Pillars

of Hercules. They built a fort in Numidia, on the site of the town of Tigisis, where two steles of white stone are to be seen, bearing an inscription in Phenician characters and in the Phenician language which runs, " We are those who fled before the face of the brigand Jesus, the son of Naue."

Dr. Krappe discusses the origin and value of this tradition which is widely current among medieval writers, and brings archaeological and philological considerations to support the theory of a Semitic settlement of northern Africa long before the Phenician efforts at colonization.

The article raises many interesting problems, and it is to be hoped that some of our valued contributors may be induced to discuss the question in these pages.

Mrs. E. Douglas van Buren has earned the gratitude of all students of Mesopotamian archaeology by a succession of careful, accurate, and well-documented studies and monographs on various aspects of the early pictorial art of Sumer and Akkad. Her latest study, published as No. 18 of Analecta Orientalia, is entitled *The Fauna of Ancient Mesopotamia as Represented in Art.*

Like her other studies it is amply illustrated by very fine reproductions of the seals, sculptures, steles and other monuments on which the various animals, birds, reptiles, and even insects, feared, hated, or worshipped by the early inhabitants of Mesopotamia are depicted. Mrs. van Buren has confined her study to the strictly natural fauna of that region, and has not dealt with the monsters and creatures of fantasy which figure so largely in early Mesopotamian art and ritual. In her study no less than forty-eight different animals are listed and instructively discussed. It may come as a surprise to some to learn that the fox, the weasel, the martin and the jerboa are to be found on Mesopotamian monuments, but it is probable that Ezekiel was familiar enough with many such beasts on the " chambers of imagery " against which his passionate invective was directed. Previous discussions and descriptions of early Mesopotamian fauna are not in a form easily accessible to English students, and Mrs. van Buren's book will be most welcome and valuable.

In comparatively recent times Chinese scholars have begun to study the origins of their own culture scientifically. In any civilization the invention or borrowing of some form of writing is the first condition of its development. Since the attention of scholars has been directed to the study of the inscribed oracle-bones known as the "*yin*" inscriptions, it has been determined that this very early stage in the history of the Chinese script goes back at least to the middle of the second millennium B.C., and possibly even earlier. Many of the pictographs, or, as Falkenstein would have us call them, word-signs, bear interesting resemblances to various signs having the same value on the early tablets from Uruk. Scholars have already pointed out resemblances between some of the signs on the gypsum tablet from Kish and Egyptian hieroglyphs. So we are reminded how little we know of the mechanism of culture-spread, and of the interrelations of the ancient civilizations of the Near and Far East. The attention of those interested in the early history of ancient writing might well be directed to these early stages of Chinese picture writing.

TIMBER AND BRICK OR MASONRY CONSTRUCTION

By Sidney Smith

The walls of a palace of the fifteenth century B.C. at 'Atshanah (Alalakh) show an unusual form of mixed timber and brick construction.[1] The foundations are of stone ; above floor level is coursed rubble, which is sometimes replaced in internal walls by basalt blocks, the intention perhaps being to avoid stain from damp caused by capillary attraction. The rubble or blocks raise the height of the wall to about 2 ft. 6 ins., or 2 ft. 9 ins. Above the stone or rubble was laid a horizontal beam, 1 ft. square or less, the side flush with the wall face. Above this were short battens about 1 ft. 8 ins. by 1 ft. by 9 ins., at right angles to the wall face, at intervals of 2 ft. to 4 ft. The intervals between were filled with mud bricks. Resting on the short battens came another beam, then more battens and so on. This construction was carried up to the height to which the walls are still preserved, about 7ft. 6ins. What happened above is uncertain.

This is quite an exceptional method of building on this site at this date. Though timber is used in other buildings, it is not used so freely ; most often beams are only used immediately above rubble foundations. Such lavish use of timber cannot be due to practical reasons, for it led to bad bonding,[2] so that the wall is apt to peel in skins. Such bonding as the timber construction secured could be better and more cheaply obtained in other ways, by no means beyond the technical achievements of the time. Sir Leonard Woolley has suggested that this type of construction is conventional, derived from building in small uncoursed rubble, and was continued long

[1] The account which follows is taken from Sir Leonard Woolley's report in *Antiquaries Journal*, XIX, 9–10.

[2] This point is of importance. The use of wood in this way with brick is intentionally decorative, and not merely bonding, as it is described by Father R. de Vaux in *Revue Biblique*, XLIX (1940), p. 257. The horizontal beams have actually weakened the bonding.

after the change to the use of mud brick in wall construction robbed it of significance.

Before this building was excavated it had already been pointed out that the early terracotta altars in the form of houses found at the city of Ashur, which must be earlier than 2300 B.C., represent buildings which seem to have surfaces relieved by wood-work or consisting of panelling in frames.[1] This effect must have been obtained in much the same way as is found at Alalakh ; the difference is, that on the models it is the exterior wall which is treated in this manner ; this may indicate an even more lavish use of wood in the earlier period than in the fifteenth century. This assumption would accord with probability ; by 1600 the Amanus was stripped of valuable timber, and the area supplied from the Lebanon was continually increasing, so that timber must have grown rarer and more valuable. The early models are good evidence that this style of construction goes back to a very early date.

Sir Leonard Woolley has stated that " the eighth century palace found by the Oriental Institute of Chicago at Tainat, opposite Atchana, is constructed in precisely the same manner with its alternate courses of wooden header and stretcher beams,[2] so that the tradition of elaborate half-timber work was long-lived but applied, seemingly, only to buildings of a special sort." Such traditions are of course generally due to religious conservatism. It is not easy to see why palace buildings at 'Atshanah and Tainat should be affected by a religious taboo, but it is always possible that royal palaces in Syria were partly also temple buildings, as has been so conclusively shown to be true of Assyria at Khorsabad.

We may now turn to a much disputed Aramaic passage in Ezra vi, 3 f., the Cyrus edict. After laying down the dimensions of a site for the house of God which is to be built, v. 3, the text reads, v. 4, " three *niḏbāḵīn* of *'eben gĕlāl*, then a *niḏbaḵ* of new wood." The meaning of *niḏbaḵ* is generally

[1] *Early History of Assyria*, p. 67.

[2] See also C. W. McEwan in the *American Journal of Archaeology*, *XLI* (1937), p. 13, who refers to similar construction found in the " Lower Palace " at Senjirli. The reference must be to *Ausgrabungen in Sendschirli*, II, S. 155, Koldewey's " Hilani III " ; the same style is assumed for the later palace, " Hilani II," see S. 153.

taken to be " course, layer," on the basis of Talmudic and New Hebrew. It has nothing to do with the Akkadian *nadbaku*, " declivity," which has sometimes been adduced, but must, ultimately, be connected with the root from which Akkadian *tikpu* or *tipku* is derived ; the change from voiceless to voiced consonants can be exampled in other cases.[1] Caspari has stated that *nidbākīn* are probably simply the sides of a square enclosure, " in Anschlusse an das Quadrat vi 3 sind es wohl einfach dessen Seiten." The edict, he thinks, prescribed that the fourth side was to be made of wood, so that Jerusalem might lose all importance as a fortress.[2] Such a conclusion condemns the interpretation, which is, in any case, unnecessary and baseless. " Course " makes excellent sense, and accords with the translation *domos* in Esdras B ; it also enables us to visualize a construction similar to, but not quite the same as, that found at ʿAtshanah and Tainat. The wood construction is not, however, continuous, and there are no small transverse battens ; only the horizontal lines remain, the panelling effect lost. Why " new " wood should be prescribed is not easily intelligible. If by " new " is meant " previously unused," perhaps a ritual taboo is involved. But if green wood is meant, as seems more likely, its purpose is not obvious. Is it possible that there was some rule-of-thumb prescription for practical purposes, to prevent the use of dry wood which would swell in damp weather and bulge ?

In Ezra v, 8, also part of the Aramaic document, it is stated that the Temple in course of construction was being built of *'eḇen gĕlāl* and of wood placed " in the *kuṭlaiya*." Both *'eben gĕlāl* and *kuṭlaiya* are technical terms. The " great stones " of the English version derive from a guess. The Septuagint *lithoi eklektoi* in Esdras B v 8 may show that the exact meaning was lost by the second century B.C., unless Esdras B is, as critics have supposed, much later, from the hand of Theodotion in the second century A.D. ; for *eklektoi* can only be a translation *ad sensum*, requiring no exact understanding of the words. Now *'eḇen gĕlāl* means literally " stones

[1] The entry in Bezold, *Glossar*, under *ṭabaqu* confuses different roots and is unreliable.

[2] W. Caspari, *Lieder und Gottessprüche der Rückwanderer*, Giessen, 1934, 133–4.

of rolling," the Aramaic root being indistinguishable from the Hebrew *gālal*. This is used of gentle motion, as of water, Amos v, 24 ; it is a cognate of Arabic *ghalla*, also used of the motion of water as between trees, and very possibly of the Akkadian *halalu*, of the movement of snakes, mice, etc., because these cause friction and a gentle noise. The stones meant are, then, large pebbles, rubbed smooth and flattish by the action of water, and therefore suitable for use in rubble courses. The *kuṭlaiya*, in which the pebbles and beams were placed, is generally translated " wall ; " but in Daniel v, 5, it is used of the core of the wall and apparently excludes the plaster. So in Ezra v, 8, also, it means a core of mud or mud brick ; then the pebbles and beams are facing. The wording of the Aramaic text clearly indicates that the *kuṭlaiya* was distinct from, not made of, the wood and stones.

If this interpretation is approximately correct, then the Temple contemplated in the edict followed, in a modified form, a type of construction even older than that found at 'Atshanah in the fifteenth century B.C. There is no hint of the intention of applying cedar panelling, as in Solomon's Temple, 1 Kings vi, 15. Did the edict impose a provisional economy[1] on conservative lines ? Or were the walls to be exterior walls, enclosing the whole site, of which the dimensions are given in Ezra vi, 3 ? The use of coursed rubble would be an indication that Sir Leonard Woolley's assumption of a preliminary stage in uncoursed rubble is correct. In other words, this construction is more primitive than that actually found in the fifteenth century.

The authenticity of the Cyrus edict, accepted by many scholars, including the historians,[2] is now quite often, some-

[1] K. Galling, in *Orientalistische Literaturzeitung*, 1937, nr. 8/9, Sp. 474 calls the materials of Ezra vi, 4, "relatively costly" which is surely incorrect. But then he seems to draw no distinction between these and those of 1 Kings vi, 36 and vii, 11. See *ibid*, Sp. 477–478.

[2] Eduard Meyer, *Die Entstehung des Judentums*, 1896 (p. 72) ; idem, *Der Papyrusfund von Elephantine*, 1912 (pp. 3–4) ; Olmstead, *History of Palestine and Syria* (p. 556), 1931 ; H. H. Schaeder, *Esra der Schreiber*, 1930 (pp. vi, 27–9) ; O. Leuze, *Die Satrapieneinteilung in Syrien und in Zweistromlande*, 1935 (p. 195[29]). Most English and Scotch scholars seem to take this view, e.g. W. B. Stevenson, in *Werden und Wesen des alten Testaments* (pp. 95–6), 1936.

times dogmatically, denied,[1] so that, for instance, Mowinckel rebukes a scholar for relying on " the Chronicler's legend." But the case against the Aramaic document has not by any means grown stronger since Torrey first stated it ; Hölscher's arguments, now generally referred to as final, are in fact no more than speculative.[2] The method of construction in the edict was not apparently used in the time of Nehemiah and *could not have been derived by any forger, after Nehemiah's time, from the sacred writings*.[3] Scholars who consider that the story of the Return in the time of Cyrus is a fabrication based on passages in the book of Isaiah, chapters 40–55, are asking us to assume that the Chronicler had in fact a knowledge of a type of construction much earlier than his own time, employed technical terms unlike anything in his sources, the meaning of which was not certainly known to the Septuagint, and was so clumsy in his forgery that he failed to copy from a passage that must have been familiar to him, 1 Kings vi, 36. So the

[1] C. C. Torrey, *Composition and Value of Ezra-Nehemiah*, 1896 ; Nöldeke in *Deutsche Literaturzeitung*, Supplement, 4th October, 1924, Sp. 1,852 ; G. F. Moore, *Judaism*, I, 23 ; G. Hölscher in Kautsch-Bertholet, *Die heiligen Schriften des alten Testaments*, 4te. Auflage, 1926 ; S. Mowinckel in *Acta Orientalia*, XVI, pp. 26–7 ; K. Galling, *Syrien in der Politik der Achaemeniden bis* 448 *v. Chr.* (Alte Orient), pp. 12, 30, 34, 40 ff. (a modification of the usual view based on an untenable interpretation of cuneiform and Greek sources) ; J. Begrich, *Studien zu Deuterojesaja*, p. 68. S. A. Cook in *Cambridge Ancient History*, III, expressed no positive opinion.

[2] For a criticism of Hölscher see Caspari, *Lieder und Gottessprüche der Rückwanderer*, p. 132, which seems correct so far as the argument depends on Ezra iii, 3, and 10 ff., v, 16, Haggai ii, 15, Zechariah iv, 9. In general the critics invert the case ; to prove their point and establish the unreliability of the Aramaic document they must show that other passages are not consonant with the edict, not that they can be explained on the assumption there was no such edict. And a reconstruction of social conditions in Palestine cannot invalidate historical evidence. The positive argument the critics can only establish by an argument about foundation stones which assumes what has to be proved (see Oesterley and Robinson, *An Introduction to the Books of the Old Testament*, p. 124). K. Galling's view of the foundation stone question in *Orientalistische Literaturzeitung* 1937, nr. 8/9, Sp. 476–478, depends upon his drastic emendation of Ezra vi, 3.

[3] For a similar judgment see R. Kittel, *Geschichte des Volkes Israel*, Band III, 2 Hälfte (1929), § 42, 5. S.316. Kittel's view that the reference may be to floors or stories, § 54, 14, SS. 477–8, is unnecessary in view of the results of excavations. It should be noted that Kittel has answered Hölscher's arguments very fully and soundly in § 42, 3–4, SS. 312–6.

historian may continue to use the Cyrus edict as a historical document.

It is natural to enquire whether this construction was used in other lands. A large geographical area in the ancient world is at once excluded. Egypt and Mesopotamia are not timber-producing countries, so naturally this construction was not employed. But even Anatolia, including Armenia, though not lacking in timber, has nothing similar. India so far has produced nothing like it. Greece also, from 1000 B.C. onwards, is, so far as I can discover, excluded. But Crete, which once had an ample supply of cypress, presents evidence of a most interesting kind. Sir Arthur Evans says, " Masonry encased in wooden timbering is already illustrated by the Early Minoan buildings at Vasiliki."[1] Such timber framing is particularly characteristic of Middle Minoan II *a* and *b*.[2] A variant form shows beams tied on the two faces of an internal wall by rounded cross-pieces.[3] Yet another variant seems typical of Middle Minoan III ; the upright beams remain, the horizontal disappear.[4] That is the reverse of the development in Western Asia, where the uprights disappeared, the horizontals remained ; the horizontal is indeed typical of early Syrian and Mesopotamian architecture. Sir Arthur Evans has several other references to later occurrences of such panel framing in buildings or in representations of buildings at Cnossus.[5]

If, as may be suspected, this style of facing a wall is a survival of log-hut construction, its continuance to a late date was dictated by the same religious preservation for divine use of what had been discarded by men as can be seen in dress. The difficulty is to find any evidence for log huts in early times in Western Asia or the Mediterranean area. Not until the development from log hut to this type of façade can be traced on some one site will such a derivation be proved. The evidence from Ras Shamra is in fact against such a theory.

[1] *Palace of Minos*, I, 306.

[2] Ibidem, I, 333 and 445.

[3] Ibidem, I, 347. This is true bonding.

[4] Ibidem, I, 368.

[5] Ibidem, II, 349, 514, 604 ; III, 92, 287, 324 ; IV, 1, 8.

Note Additionelle

Par C. F.-A. Schaeffer

Monsieur Sidney Smith ayant bien voulu me demander mon opinion sur la question de l'emploi de poutres dans l'architecture de la Syrie septentrionale au deuxième millénaire, je résume ici les observations faites à Ras Shamra.

L'utilisation de poutres de bois logées dans la maçonnerie était une pratique constante dans l'architecture d'Ugarit dès le début du deuxième millénaire au moins. Nous l'avons observé aussi bien dans les murs des temples et des bâtiments de caractère officiel que dans les habitations privées. Les poutres étaient placées horizontalement entre les assises en pierres de taille, d'aplomb avec la face extérieure du mur. Dans les cas où la conservation des ruines a permis l'observation, les poutres se trouvaient toujours dans la partie du mur qui s'élevait au-dessus du niveau du sol ancien, généralement entre la première et la deuxième assise ou entre la troisième et la quatrième. Nous n'avons pas pu constater si plusieurs rangées de poutres avaient été employées, les murs à Ugarit n'étant généralement conservés que jusqu'à deux mètres de hauteur au maximum.

L'épaisseur des poutres varie suivant le format de l'appareil. Dans une des habitations privées de la ville basse au pied du temple de Baʿal, la poutre avait 20 cm. (8 ins.) d'épaisseur. La longueur atteignait 11 m. (12 yards) à moins qu'on utilisait plusieurs poutres placées bout à bout et reliées entre elles.[1] Dans l'important ouvrage fortifié découvert pendant notre dernière campagne de fouilles en 1939, avant le commencement de cette guerre, les poutres atteignaient 40 cm. (16 ins.) d'épaisseur.[2] D'après les morceaux calcinés encore conservés en place, c'était probablement du bois d'une essence résineuse à fibres serrées (cèdre ? les analyses n'ont pas encore pu être entreprises).

Dans certains cas des poutres traversaient les murs aussi dans le sens transversal. Reliées aux poutres longitudinales, elles constituaient ainsi un chaînage très solide,

[1] Notre rapport de la huitième campagne, *Syria*, XVIII (1937), p. 142, et suivant.—*Ugaritica*, I, p. 92 et suivant.

[2] *Cf.* rapport des X^e^–XI^e^ campagnes, *Syria*, XX (1940), p. 288, fig. 11.

augmentant considérablement la résistance des murs. Ceci était particulièrement appréciable dans les pays fréquemment éprouvés par des tremblements de terre comme le sont ceux de la Méditerranée orientale aux fonds encore imparfaitement stables.

Ugarit en particulier avait sévèrement souffert des séismes et probablement à plusieurs reprises. Les ruines de la ville en ont gardé les traces[1] et le souvenir s'en est conservé dans le récit de certains textes religieux retrouvés dans la bibliothèque.[2]

Est-il pure coincidence que partout où l'on a retrouvé cette même architecture, en Crète, à Tirynthe et Mycènes, à Troie, à Atchana et en Palestine, il s'agit de régions réputées pour l'instabilité de leur sol depuis l'antiquité et jusqu'à nos jours ? Dans certains cas, p. ex. à Cnosse[3] et à Troie,[4] les observations archéologiques ont confirmé, comme à Ras Shamra, les dégâts causés par les séismes au cours du deuxième millénaire en particulier. Mais il est certain que l'emploi de poutres logées dans la maçonnerie des bâtiments et des habitations à Ugarit ne s'était pas généralisé uniquement à la suite des tremblements de terre qui périodiquement menaçaient la ville.

La proximité des Montagnes Ansaries et du massif du Djebel Aḳra, le Mont Casius des Anciens, encore aujourd'hui partiellement boisés, a certainement contribué au développement de cette architecture à Ugarit, qui consumait beaucoup de bois. D'après l'une des lettres d'el Amarna, c'était au port d'Ugarit que les navires giblites se rendaient pour charger certaines essences reputées, comme le bois appelé *urkarinu*,[5] destiné à l'Égypte.

Quant à l'origine de l'architecture au poutrage de bois, elle ne saurait être discutée dans une note aussi courte. La question se relie a celle de son rayonnement sur des régions constituant le domaine de civilisations différentes les unes des autres.

[1] *Ugaritica*, I, p. 35.—*Syria*, XVIII (1937), p. 137 et suivant.
[2] l.c. ci-dessus.
[3] Evans, *Palace of Minos*, I, p. 333; *Ugaritica*, I, p. 95.
[4] Karl W. Blegen, *Excavations at Troy*, 1934, dans *American Journal of Archaeology*, XXXIX (1935), no. 1, p. 17.
[5] J. A. Knudtzon, *Die el Amarna Tafeln*, Leipzig, 1915, S. 125, ll. 4–11.

D'autre part nous ignorons à quelle époque la technique de l'armature des murs par des poutres avait été inventée. Sans doute est-elle tres ancienne,[1] et elle reste en faveur bien après la disparition d'Ugarit. En Palestine elle était employée encore du temps de Salomon, comme les fouilles de Megiddo l'ont prouvé,[2] et la Bible nous apprend qu'elle avait aussi été adoptée par les architectes du temple et du palais de Jerusalem où, comme à Ugarit, l'on posait une rangée de poutres après trois assises en pierres de taille.[3]

Addendum

I HAVE now been able to consult Mr. G. M. FitzGerald as to the evidence from Beisan on this subject. He has referred me to Mr. Alan Rowe's description in his recently published book, *The Four Canaanite Temples at Beisan*, to which I have not had access yet. On pp. 2–3 Mr. Rowe says of the Level V Temples that they had " beams or poles bearing upon the stones " of the foundations, and adds in a footnote, " In some cases small pieces of wood (never burnt) are visible in the upper parts of the brick walls of the temples." Again on p. 32 he goes on to say of the " Northern Temple " of the same period, " All the walls of the temple are of brick and all, with the exception of the eastern wall which is built upon débris, rest upon layers of unquarried basalt stones, 60 cm. to 80 cm. in height, arranged to about the width of the walls. Traces of wood are visible between the stones and the bricks, and in one or two instances small fragments of wood are even seen in the wall itself, embedded between the bricks." This account is not altogether clear to me; the word " unquarried " is not easily intelligible in this connection, perhaps

[1] M. Sidney Smith signale la pratique dès le milieu du troisième millénaire en Assyrie, *cf. Early History of Assyria*, p. 67 et suiv.

[2] P. L. O. Guy, *New Light from Armageddon* (Oriental Institute Communications, No. 9), p. 34; R. S. Lamon and G. M. Shipton, *Megiddo* I, seasons 1925–34, p. 47.

[3] I Rois VI, 36; VII, 12.—*Cf.* aussi R. de Vaux, dans *Revue Biblique*, 49 (1940), p. 257, et S. Smith, ci-dessous, p. 9, et *Addendum*. Sur des exemples modernes de l'emploi de poutres dans la maçonnerie *cf. Ugaritica* I, p. 96.

it implies that the basalt blocks were not trimmed.[1] It is also not certain whether Mr. Rowe means, as his words might mean, that timber battens at right-angles to the wall face formed a bonding of the kind found by M. Schaeffer at Ras Shamra. The buildings of Level V at Beisan are of the Iron Age, not earlier than 1150 B.C., if Albright's dating of the Beisan levels[2] be accepted. The evidence from Beisan, then, affords an instance of this type of timber and brick construction intermediary in date between the fifteenth century palace at 'Atshanah and the eighth century palace at Tainat.[3] And if the building at Beisan is a temple, as is possible or probable, but hardly certain, then this case agrees with the restriction of this type of construction found apparently in northern Syria inland, but not on the coast, as is shown by M. Schaeffer's statement.

Mr. FitzGerald has suggested certain considerations and raised certain questions which exceed the original purpose of this note, but must be mentioned here for their great interest. He points out that the turn of phrase in Ezra vi, 4, is very like that of 1 Kings vi, 36, and that Père A. Barrois, in his *Manuel de l'Archéologie Biblique*, p. 104, takes the three stone courses and one cedar course as an allusion to timber bonding, *chaînage*. This is by no means certainly correct ; the word *tūr* is quite consistent with beams simply laid along the wall-face, for it is used of surface ornament, 1 Kings vii, 20, 24. Now vi, 36, speaks of trimmed stones, *gāzīth*, and cedar battens, *kĕruṭōṭ 'ărāzīm* ; the appearance of the wall of the inner court must have closely resembled one at Ras Shamra. But in the edict of Cyrus, according to the Aramaic document, the wall is to be of coursed rubble and " new " wood. Mr. FitzGerald has very rightly referred to Esdras A (or III), vi, 9 and 24. In the first case, vi, 9, the elders are said to be building the temple with costly trimmed stones, beams being placed

[1] Mr. FitzGerald refers me to *Palestine Exploration Fund Quarterly Statement*, 1932, Plate I, facing p. 148, and Plate II, for untrimmed blocks in the lowest courses.

[2] See *Annual of the American Schools of Oriental Research*, vol. XVII, art. 86, and G. M. FitzGerald's review in this *Quarterly*, April, 1940, p. 81.

[3] Mr. Crowfoot is certainly right, in this *Quarterly*, October, 1940, p. 145, in refusing to admit that the use of wood in masonry walls dates Level IV at Megiddo.

in the *oikoi*, διὰ λίθων ξυστῶν πολυτελῶν,[1] ξύλων τιθεμένων ἐν τοῖς οἴκοις. It is clear from the additional "costly," as well as from the *xystos*, here "trimmed," that *lithoi xystoi* are not derived from the *'eḇen gĕlāl* of Ezra vi, 4, but are due to copying by the compiler of Esdras A from *gāzīth*, 1 Kings vi, 36. And it would seem that, in the Greek translation used by the compiler, *oikoi* corresponds to the *kuṭlaiya* of the Aramaic; for it must be remembered that the view of Grotius, that the compiler of Esdras A used a Greek translation which was much earlier than Esdras B, is still the most probable,[2] so that *oikoi* cannot be a misunderstanding of *domoi* in Esdras B, and it does not mean "courses."

Now Esdras A, vi, 24, says of the temple that it was being built in Cyrus's time "of three trimmed-stone layers and one new-local-wooden-layer," διὰ δόμων λιθίνων ξυστῶν τριῶν καὶ δόμου ξυλινου ἐγχωρίου καινοῦ ἑνός. Thus the "trimmed stones" of v, 9, re-appear, quite consistently, in vi, 24, but without the adjective "costly." That would indeed have been out of place, for good stone should be accompanied by good wood, as appears from 1 Kings vi, 36. The complicated phrase about the wooden layer needs dissection. The "one" can only have been inserted in the Greek, as also in Esdras B, vi, 4, to balance the "three"; Mr. FitzGerald points out that though it might be thought to point to חד[3] for חדת in Ezra vi, 4, the conclusion is impossible in view of *kainos*. And there need be no doubt that *kainos* is intended for a translation of חדת; *neos* in this connection would have meant wood from a young tree. But what is

[1] The punctuation follows Maclean and Brooke in the Cambridge Press edition of the Septuagint. The supplement to the Vulgate has only a loose paraphrase.

[2] See e.g. O. Eissfeldt, *Einleitung in das Alte Testament*, art. 71.

[3] This reading is adopted in Kittel, *Biblia Hebraica*, 3te Auflage, 1292, as by Kittel himself, *Geschichte*, III, ii, S. 301, as the result of a wrong use of LXX. Others have also adopted it, e.g. the margin of the Revised Version; L. W. Batten, *The Books of Ezra and Nehemiah* (*International Critical Commentary*), p. 142 (an amusing note); M. Haller, *Das Judentum*, 2te. Auflage (*Die Schriften des Alten Testaments in Auswahl*, II, 3) S. 74. E. Meyer, *Entstehung des Judentums*, 46, note 4, says, "Fur חתַר 'neu' ist mit Ryssel und LXX חדה 'eine' zu lesen." So the "correction" seems to have started as a grammatical error. The fact that חדת is not easily explicable is an argument for, not against, the Masorctic text.

the point of " local," *enchorios*, which must of course refer, in sense, to the wood ? It may be that the translator into Greek was as puzzled by the " new," as I must confess I am, and that he thought out a reason. The edict laid down that " new " wood was to be used, so that no timber that had been put to profane use, however precious and well-seasoned, should be employed in the Temple ; so, perhaps the translator argued, the edict can only mean local wood to be used. But even if that was the translator's view it is not necessarily, or even probably, correct. Local wood was in fact cheaper,[1] as was coursed rubble, than Solomon's materials, but what local wood would be suitable ?

The distinction between 1 Kings vi, 36, and Ezra vi, 4, in the materials used is clear ; the one cannot be derived from the other. The Greek version in Esdras A, vi, 24, uses both passages. But the general parallelism, dependent on the type of construction intended, seems to point very strongly to the conclusion that the Cyrus edict and 1 Kings vi, 36, deal with the same part of the Temple building, however the dimensions given in Ezra vi, 3, be explained.[2] This is a matter for students of the Temple and is far removed from the immediate purpose, to collect some instances of an unusual architectural type, to illustrate the meaning of a Biblical passage. The collection cannot, by the way, make any pretence to be complete.

Finally, Mr. FitzGerald argues, against the interpretation of *kuṭlaiya* in the Aramaic document which I have suggested, that Jerusalem is not a district of mud and brick, and that important buildings there would be of stone throughout, though he admits that Watzinger, *Denkmäler*, I, 92, does not take this view. It may well be that the interpretation I suggested is based too exclusively on the Syrian evidence. If the walls thought of in Ezra vi, 4, were to consist entirely of coursed rubble and " new " wood, then we must, I suppose, infer that the timbers were transversal ; otherwise the con-

[1] The royal exchequer was to pay for this building.

[2] K. Moehlenbrink, *Der Tempel Salomos*, Stuttgart, 1932, S. 151, referred these dimensions to the forecourts, " Vorhöfe," J. Jeremias, *Hesekieltempel und Serubbabeltempel*, in *Zeitschrift für alttestamentliche Wissenschaft* (N.F.) XI (1934), S. 110, to the " Tempelhaus."

struction would surely be unpractical.[1] The wording in Ezra v, 8, is then very loose and inaccurate, but still quite independent, and not likely to have occurred in a fabrication. But there is still much in favour of translating " core of wall," whether the material was mud brick or not.

[1] Mr. FitzGerald says, on this point, " horizontal timbers were (and still are, quite often) laid on the rough stones of the foundations to make a flat bed for the mud brick construction above. I am not so sure that if the building went on up in rough stones the same device might not be practical, or thought to be so. I am, therefore, not quite sure that transverse boarding is necessarily in question." Experience would be a good teacher.

SIR AUREL STEIN'S EXPLORATIONS OF THE ROMAN FRONTIERS IN IRAQ AND TRANS-JORDAN

THAT learned and indefatigable explorer, Sir Aurel Stein, undertook, in 1938–9, certain journeys by land and air, in search of the Roman frontier defences in Iraq and Trans-Jordan. An account of these explorations appeared in the *Geographical Journal* for June, 1940, and the following summary is extracted, with the permission of the Royal Geographical Society, from that journal.

Sir Aurel remarks that his exploratory work in March–May, 1938, had proved " that a chain of fortified posts, extending on both sides of the Sinjar Range, protected what since Trajan's time (A.D. 98–117) had become Roman territory between the Khabur river and the Tigris, against Parthian and, later on, Sasanian inroads. They guarded what at all periods was a main route for both trade and invasion between northern Syria and Mesopotamia. These explorations formed the initial portions of surveys planned to extend the very fruitful labours of Père Poidebard, devoted to the remains of the Roman *Limes* in the Syrian desert, into the adjacent parts of Iraq and Trans-Jordan." It may save a reference to an atlas if we here remark that the Sinjar Range stretches in a westerly direction from a point some forty or fifty miles to the west of Mosul on the Tigris.

Sir Aurel acknowledges the help that he received from Air Vice-Marshal Tyssen in Iraq, and from Group Captain N. C. Lowe in Trans-Jordan, in enabling him to make a long succession of reconnaissance flights and in allowing him to study the aerial photographs taken during these flights, photographs which proved to be of great value.

Leaving the northern part of his reconnaissance, he went south to the middle Euphrates and now began a remarkable series of explorations of the Roman frontiers along a great arc, stretching from Hit on that river, through Qasr Helqum,

Qasr Azraq and Ma'an to Aqaba. This arc is some 600 miles in length and for the greater part faces the Syrian Desert, and was a Roman frontier region for more than 200 years. He remarks of Hit that this old town was well known from the earliest historical times, for its bitumen springs, " It was the starting point for an important ancient trade route through the Syrian Desert, which had during many centuries down to modern times linked the centre of Mesopotamia, successively represented by Babylon, Ctesiphon and Baghdad, with the great desert emporiums of Palmyra as well as Damascus." He found at Qasr Khubbaz, less than forty miles west of Hit, a comparatively well preserved ruin of a Roman castellum " of the type familiar from the Syrian *Limes*," and close by its side a stone dam of Roman construction, across the head of a wadi, forming a reservoir capable of holding two million gallons of water.

After some interesting discoveries in the neighbourhood of the Euphrates, in January, 1939, he " left the river and definitely turned into the desert stretching far away westwards. Our work in the desert belt between the frontiers of Syria in the north and Ibn Sa'ud's Arabian dominion in the south was facilitated by the fact that the Iraq Petroleum Company's pipeline, for close on 600 miles, runs right through this belt. . . . Its well organized pumping stations afforded convenient bases for the R.A.F. aircraft serving for my reconnaissance flights."

He resumed the survey of the ancient trade route from Hit to Palmyra and was able to recognize the line both from the air and on the ground ; it led across the sandy depression of Qa'ara. Observation from the air showed the remains of a castellum in that basin, though the post appears to have been subsequently moved to the wells of Qasr Helqum, which has a fort of about the time of Diocletian (*c.* 300 A.D.).

At Wadi As Swab there appeared to have been an important half-way station, with a castellum and remains of a settlement. He found two much decayed Roman posts at Mlosi and Ar Ra. No ruins were found in the desert stretch of sixty miles to the west of Mlosi.

Until the beginning of January, 1939, he had been piloted very successfully by Pilot Officer L. H. Hunt of the Iraq Air Force, and later he " had reason to feel very grateful to the

officer commanding the R.A.F. at Amman," in Trans-Jordan, for arranging such flights as service conditions allowed. At Burqu he found a Roman dam which formed a reservoir in the Wadi Minqat, with a defensive tower.

In March, 1939, he camped at the most westerly pumping station on the pipe-line in the centre of the lava belt in Trans-Jordan, and visited a series of ruined castella, which originally protected the settled country in Hauran against nomadic raiders. The lines of Roman roads could also be traced ; one road, still used by camel caravans carrying salt to Bosra and Damascus, leads due north from the well-known ruined castle at Qasr Azraq. Here the plan of a typical Roman castellum could still be made out, and here an altar stone, with inscriptions in Latin and Greek, proves Roman occupation in the third century A.D.

Qasr Azraq is " the centre of a series of Roman posts and signal stations, all so far unsurveyed. One of these ruins, known as Qasr Usaikhin, occupies the top of an isolated volcanic hill affording an extensive view. This small castellum is in an excellent state of preservation. On the opposite side of the depression at the head of the Wadi Sirhan is a massive Roman watch tower, constructed " by a detachment of the III Legio Cyrenaica in A.D. 201."

Further south, near the small oasis of Ma'an, the last place which the Hejjaz Railway still reaches from the north, Sir Aurel made an exact plane-table survey of an old local irrigation system, supplied with water from the hills above the ruined Roman cantonment of Odhrah. He remarks that all the abundant Roman remains north of Petra, together with the Roman roads in this area, had been studied in 1897–8 by Professors Brünnow and Domaszewski, but their work had not extended to the ground between Petra and the head of the Gulf of Aqaba, through which had passed the most southerly part of Trajan's great highway (*c.* A.D. 100), the *Via Nova*, which connected Aqaba, the ancient Aila, with Petra and Bosra.

" Aqaba, a poor village with modest date-palm groves edging the seashore, had nothing to show of the once important port, apart from low debris mounds still preserving the ancient name of Aila. The moist heat of the place was oppres-

SKETCH MAP OF SIR AUREL STEIN'S JOURNEY IN 1939.

1. ROMAN BRIDGE OVER WADI AL MURR, ESKI MOSUL

2. ROMAN MILESTONE BEYOND AL KHALIDI

sive." Here the surveyor Iltifat Husain, carried out a plane table survey of the ground traversed by the ancient road, which, " like other strategically important routes, constructed and guarded in outlying territories of the Roman Empire, . . . may be justly classed as a *Limes*."

" Exactly at the distance of twenty-one miles which the *Tabula* of Peutinger indicates for the first stage on the road from Aila to Petra, we found, at Al Khalidi, ancient cisterns by the road and on the hillside above it a ruined castellum." Then, going north, they next came to the desert patrol post of Qweira, built under the walls of a small Roman castellum and on the way saw the remains of many milestones, all of friable sandstone, repeatedly replaced in the course of centuries. Then, about midway between Aqaba and Petra, they came to the large ruined site of Homeima, at the place indicated by the *Tabula* for Auara, probably the site of a Roman cantonment. Then, after a détour to the head of the Wadi Qana, once again to the ancient road, which " keeps as close as possible to the watershed at an average elevation of 5,000 feet, preserving a uniform width of sixteen–eighteen feet ; . . . throughout the long stretch from Petra it commanded the ground on either side, just as a proper Roman road, wherever possible, should."

Sir Aurel writes, " All the more important Hellenistic and Roman sites of Trans-Jordan have been repeatedly visited and recorded by earlier students. The principal Roman roads within the area, accessible in Turkish times, had formed the subject of careful investigation by Professors Brünnow and Domaszewski." But he adds that he was glad to be able to see for himself the Roman cantonments of Odhrah and Lejjun and the castella of Al Kastal and Hallabat.

And so ends a brief account of a fine journey by air, by car, and by camel along " the far-flung south-eastern frontier of the Roman Empire right down to the shore of the Red Sea."

C. A.-C.

IS BEITIN THE BETHEL OF JEROBOAM?

By W. Ross

For several years now excavation in Palestine has been almost at a standstill. The contrast between the present hour and six years ago may be realized by scanning the following list of individuals and institutions, all of whom or which had licence to excavate from the Department of Antiquities in Jerusalem, without whose permission a spade cannot be put into the soil of Palestine:

(1) The Oriental Institute of the University of Chicago, for work at Tell-el Mutesellim (ancient Megiddo).

(2) Baron Edmond de Rothschild for et-Tell (Bethsaida-Julias).

(3) The Wellcome Archaeological Expedition in the Near East, Tell ed-Duweir (ancient Lachish).

(4) The British School of Archaeology in Jerusalem working at Wady el-Mugharah (Miss Garrod).

(5) The American School of Oriental Research and the Pittsburgh-Xenia Theological Seminary (Beitin, Bethel).

(6) The Palestine Exploration Fund (Abu Shusheh in the Maritime Plain)—a list of enterprises that reminds one forcibly of the potential losses to Biblical science through the pitiable plight of Palestine ever since, though now, as we write, Arab and Jew, in their common antagonism to Nazism, and their common sympathy with Britain and the cause she stands for, have found a way of peace and the promise of a better day.

Specially interesting in 1934 was the excavation of Beitin, under the leadership of Profs. Albright and Kelso.

Considerations of space compel me to pass over the interesting but not specially rewarding finds of the Beitin excavation, the dozen or more "floors of occupation" alternating with "layers of destruction," the clearly defined spot at which the Israelites started to build, with the striking fact that their mason-work was very much inferior to that of the Canaanites, the eighteen coins dating from 135–65 B.C. and

the fifteen from 4 B.C. to 69 A.D., the little hoards of silver coins from 211–200 B.C. and 136–130 B.C. ; the small cylinder of frit with the figures of Baal and Astarte, with the name of the goddess spelt in Egyptian hieroglyphics, and the bone handle of a sistrum, a musical instrument used by Egyptians in the worship of Isis. This article limits itself to one question, namely : Is Beitin the Bethel of Jeroboam, the seat of the Government and the Sanctuary of worship of the Northern Kingdom ?

Beitin beyond question is one of the Bethels of the Old Testament. The ending " in " instead of " el " constitutes no real difficulty. Parallel changes in the last syllable may be adduced. Jezreel e.g. has become Zer'in, the Wady Isma'il is generally pronounced Isma'in ; Beit Jibrin appears in Arabic as Beit Jibril i.e. Gabriel. Beitin is undoubtedly the Bethel of Judges xxi, 19 : " Behold, there is a feast of the Lord in Shiloh, in a place which is on the north side of Bethel, on the east side of the highway that goeth up from Bethel to Shechem, and on the south of Lebonah." The location of Beitin could hardly be more correctly defined. It is doubtless the Bethel of Jacob's dream, and it is the place of that name described in the Onomasticon of Eusebius. Another Bethel, however, appears in 1 Sam. xxx, 27, and also in Joshua xix, 4. The name in this case is spelt Bethul, and in 1 Chron. iv, 30, it is Bethuel, but the site is unknown. It should be kept in mind, however, that Bethel in Hebrew as in English was a common noun as well as a proper name.

Keeping all these things in mind we put our question again : Is Beitin the Bethel of Jeroboam, the seat of the Government and the sanctuary of Northern Israel ? The question may surprise us. Is it conceivable that archaeologists of the status of Albright and Kelso should spend many months and hundreds if not thousands of pounds in digging in the wrong place ? That, quite frankly, is my contention, and in advancing that contention I am treading in the footsteps of one of the first rank of archaeologists, Colonel R. Conder, R.E., LL.D., D.C.L.

Conder's argument is found in his *Tent Work in Palestine*. As we recall it and consider it, we do not forget that the excavators of 1934 met with a keen disappointment in finding no

trace of the shrine of Northern Israel. " In one respect, however," wrote Albright, " our archaeological results have diverged widely from the expected picture. No trace of the sanctuary built by Jeroboam and still used in the following centuries was found." How comes it that the results of the excavation diverged so widely from the expected picture? Conder gives his proleptic answer, an answer that must challenge the consideration of any open mind, an answer which I find very convincing.

The story of Jeroboam's Bethel is detailed in 1 Kings xii—the stark folly of Rehoboam, the disruption of the kingdom, the deputation to Jeroboam, his consent and his coronation as King of Northern Israel, and, immediately thereupon, the establishment of the sanctuaries of worship at Dan and Bethel. " Jeroboam said in his heart: Now shall the kingdom return to the house of David. If this people go up to do sacrifice in the house of the Lord at Jerusalem, then shall the heart of the people turn again to their lord, even unto the king of Judah, and they shall kill me and return unto Rehoboam. Whereupon the king took counsel and made two calves of gold and said to them: It is too much for you to go up to Jerusalem. Behold thy gods, O Israel, that brought thee up from Egypt. And he set the one in Bethel and the other in Dan. And he made a house of high places." In other words, Jeroboam made a sanctuary of worship, the sole object of which was to prevent his people worshipping at Jerusalem.

Jeroboam's Bethel must have been a place of some size and dignity. The prophet Amos informs us that it was the " place of the King's chapel and the King's court." The shrine had an altar, and a college of priests, and a ritual of sacrifice of its own. Strange, is it not, that no trace of these things was found!

Here then is Conder's argument; the reader can weigh it and judge for himself. To my mind it seems convincing.

(1) One of Jeroboam's first acts was the building of Shechem in which he made his home. He " dwelt therein," 1 Kings xii, 25. If then Jeroboam established his court at Shechem and made his home there, it would be strange indeed if the sanctuary of his people's worship were not there also, and all the more when we know that the king himself was in the habit of officiating at the altar. " There came a man of

God unto Bethel, and Jeroboam stood by the altar to burn incense." (1 Kings xiii, 1). Amos, moreover, as we have seen above, tells us expressly that the bethel of the Northern Kingdom was the place of the King's Court and of the King's Chapel, that is, his place of worship. The only possible inference from these facts is that Shechem the place of the King's residence was also his bethel, the place of his worship.

(2) The sole purpose of Jeroboam's erecting a sanctuary and making golden calves was to prevent his people going to Jerusalem for worship. Beitin lay upon the borderland between the two kingdoms within an easy walk of Jerusalem. It was captured by Abijah, after which, if not before, it must have belonged to Judah, and not to Israel. In any case it does seem unbelievable that Jeroboam should have chosen a town on the southern border of his kingdom and near Jerusalem for his place of worship when his only object in establishing another sanctuary was to keep his people from worshipping in that city.

(3) Arguments from silence are not final, but one is struck by the fact that the narrative of the capture of Bethel by Abijah (2 Chron. xiii, 19) says nothing of a sanctuary or of golden calves.

(4) The King of Assyria repeopled Samaria and its cities from Babylon, Cuthah, Hamath, Sepharvaim, an amalgam of pagan aliens. (2 Kings xvii, 24.) They knew nothing of Jehovah, the God of Israel, and they did not worship Him. Disasters fell upon them, which they themselves interpreted as judgments for their failure to worship the God of the land. "The Lord sent lions among them, which slew some of them." Urgent messages were sent to the King of Assyria : "The nations thou hast removed and placed in the cities of Samaria know not the manner of the God of the Land ; therefore he hath sent lions among them and they slay them. Then the King of Assyria commanded saying : carry thither one of the priests whom ye brought from thence, and let them go and dwell there, and let him teach them the manner of the God of the land."

The point of this quaint Old Testament story, so far as the identity of Jeroboam's bethel is concerned is this : The people whom the priest was sent to initiate into the ways of the God of

the land were Samaritans, and the place he was sent to was their bethel. If that were Beitin, it was outside of Samaria altogether ; it was now in the kingdom of Judah. Is that credible ? Is it not on the other hand certain that the bethel referred to would be the city where Jeroboam lived, the city of the court and of the King's Chapel ?

Two things more by way of confirmation : (1) Shechem's right to the title of sanctuary was indeed hereditary. It descended from the days of Joshua. " So Joshua made a covenant with the people that day and set them a statute and an ordinance in Shechem, and Joshua wrote these words in the book of the Law of God, and took a great stone and set it up there under an oak, which was by the sanctuary of the Lord."

The other circumstance, not less noteworthy, is this : Jeroboam, the son of Nebat, reigned twenty-two years over Israel, 937–915 B.C. The links between Beitin and Judah during that period were much closer than those with the Northern Kingdom. " It is very interesting to note," writes Prof. Albright, " that Bethel though belonging to the Northern Kingdom was much more closely associated with the south by trade relations. In several score baskets of Iron II pottery from Phase I [the time of Jeroboam I and his immediate successor], less than twenty sherds belong to Samaria. . . . Aside from these imported sherds, practically all the pottery was identical with the contemporary pottery of Judah." The evidence is cumulative, and to my mind it is very convincing. Jeroboam rebuilt Shechem and lived there. Amos tells us that the King's Court and the King's Chapel were in the same place. Jeroboam was in the habit of officiating at the altar of worship himself. Beitin was within a few miles of Jerusalem and its associations are proved by the recent excavations to have been far more with Judah than Samaria. On the face of it it seems the last place where Jeroboam would have set up a sanctuary, an altar and idols to prevent his people going to Jerusalem. To say that the American School of Oriental Research and the Pittsburgh-Xenia Theological Seminary spent months in digging and searching in the wrong place is a bold statement to make, but, standing behind the big figure of Colonel Conder, I have no hesitation in making it. Is it not confirmed by the fact that " In one respect [the vitally im-

portant respect] our archaeological results have diverged widely from the expected picture. No trace of the sanctuary built by Jeroboam, and still used in the following centuries, was found"?

The reason for the transference of the site of the Israelite shrine from Shechem to Beitin is not difficult to understand. The bigotry of the Jew and his bitterness against the Northern Kingdom and its inhabitants made him jealous of any historical heritage especially if religious prestige were concerned. One striking illustration of it is found in the Tomb of Joseph at Hebron—a modern house erected against the western wall of the Haram over the Cave of Machpelah. Joseph, as we know from Scripture, was buried at Shechem, and a Moslem wely marks the traditional spot, but the Jews, jealous of the claim of Samaria to the tomb of one of their most honoured patriarchs, concocted the legend that his bones had been removed to Hebron, for the confirmation of which a house had to be built contiguous to Machpelah and called "The Tomb of Joseph." The transference of the site of the sanctuary of Israel from Shechem to Beitin is, I doubt not, another instance of the same rooted, and unreasoning, but entirely intelligible jealousy.

Beitin however is a sacred place. It is the Bethel of Jacob's vision and vow, the spot to which he was commanded by God speaking through his conscience to return after twenty years of sheer worldiness with Laban, the place where he must build an altar and dwell for the rest of his days.

MAP OF ROMAN PALESTINE

We have received from Sir Humphrey Milford of the Oxford University Press, a copy of the second, revised edition of the map of Roman Palestine, accompanied by a very complete Memoir of fifty-six pages, the whole issued for the Government of Palestine. The Memoir is about 8½ inches by 11 inches. The Map and Memoir are sold for 6*s*.

The map is on the scale of 1 : 250,000, or about four miles to one inch. It extends from a little north of Acre to Beersheba in the south, and from the Mediterranean to the Sea of Galilee, the River Jordan, and the Dead Sea on the east. The map and memoir are both the work of M. Avi-Yonah, and in the introduction the author remarks that the map " is meant to give a survey of the country as it existed between the time of Josephus and the time of Eusebius, that is between the first and the fourth centuries A.D. It is assumed that in this year the purely Roman development in Palestine reached its zenith. . . . In order, however, to follow the territorial division of the country up to the end of Roman rule, the provincial division shown on the map is that of A.D. 400, with later developments indicated by special signs."

The map is printed on a single sheet of paper about four feet long by two feet wide. It is printed in four colours, in addition to black; black for Roman names, roads, tracks and conventional signs; red for Roman boundaries and names of territories and divisions; blue for rivers, springs, wells and baths; brown for sites of which no archaeological traces remain; and a light grey background of modern topographical detail. No hill features are shown, no doubt to avoid crowding the map.

There are more than thirty conventional signs which, properly studied, give a wealth of information with regard to the conditions of life in Palestine some sixteen centuries ago; legionary fortresses, watch towers, temples, altars, synagogues, theatres, amphitheatres, hippodromes, quarries, mines, villas,

aqueducts, all with their appropriate signs, all testifying to a vigorously organized life, but destined to change into something radically different, just as the well-organized life of Roman Britain of the same period was doomed to pass into a semi-barbarous condition, though more quickly.

This book, however, apart from the map has great value to students of the Mishnah, Tosefta, Talmud (both Palestinian and Babylonian) and Midrash. The author has gathered all the available material relating to the history of Palestine during his period. Utilizing the researches of all the scholars on the subject he identifies a large number of place-names mentioned in the rabbinical and kindred literature.

C. A.-C.

REVIEWS AND NOTICES

The Bible and Archaeology. By Sir Frederic Kenyon. (George G. Harrap and Co., Ltd., 1940. Pp. 310. 15*s*. net.)

In this volume Sir Frederic Kenyon provides for the non-specialist reader a survey of the principal results of archaeological research during the past hundred years in their bearing on the Bible. After an introductory chapter on the nature of archaeological evidence—which will be referrred to again later—there follows an account, covering six chapters, of the chief discoveries in Mesopotamia, Egypt, Crete, Philistia, Syria, Palestine and Sinai. Another chapter is devoted to the Hittites, and two others to papyri and other manuscripts. In the last two chapters the results are summed up.

Where so much ground is covered, any detailed account of the contents of the book is, of course, impossible. It must suffice to say that there is scarcely an important site excavated, or a manuscript discovered, in the last century, to which reference is not made. For the greater part of the book the author has been dependent on the work of others. Indeed, it could not be otherwise, for, as he himself writes in his preface, " no one could write with first-hand knowledge of all the discoveries described and of all the subjects touched on " (p. 8). Inevitably, therefore, the expert reader will be critical of some of the views he adopts. For example, in his account of the Lachish letters, he includes some points from Torczyner's theory which are untenable (e.g. letter iv does not, as stated on p. 195, necessarily prove that Tell ed-Duweir is Lachish ; and again, the identification of the prophet mentioned in the letters with " the open-eyed " (= " seer "), referred to on p. 196, is more than doubtful). But Sir Frederic is, after all, not writing for the expert, but for the general reader, and for him he has told a fascinating story well. The magnitude of his task and the very able way in which he has performed it will be appreciated by everyone who knows something of the wealth of archaeological material now at the disposal of Biblical scholars and of the difficulty of dealing with it.

One of the most valuable chapters in the book is the first, on the nature of archaeological evidence. Here the author provides a much needed corrective to the views of some other modern writers on Biblical archaeology. We note especially his remarks on the kind of help that may legitimately be expected from archaeological research (p. 16ff) ; his clear recognition that some assured results have been attained by the literary critics of the Old Testament—results " which must be taken into account no less than the evidence of archaeology " (p. 20) ; his statement that " the doctrine of an infallible Bible will not, indeed, stand the slightest examination " (p. 26) ; and his assertion that it is a " progressive revelation that is most likely to be illuminated by archaeological discovery " (p. 28). In the final words of this chapter he states his belief that " the progress of archaeological research will be found to constitute a steady march in the direction of establishing the essential trustworthiness of the Bible narrative, and of greatly increasing our intelligent comprehension of it, and thereby our appreciation of its spiritual message, which constitutes its real value for mankind " (p. 30). There is much else in this chapter that deserves to be quoted. Enough has been said, however, to indicate the breadth of view and sober judgment which Sir Frederic brings to his task.

It is only necessary to add that there are some excellent illustrations, a useful map of the Near East on which excavation sites are clearly marked, and a good index.

D. Winton Thomas.

Herbert Bentwich The Pilgrim Father by Margery and Norman Bentwich (Hozaah Ivrith, Jerusalem) is the story of an exceptionally happy partnership, told by two of the children of that partnership. The writing of the book was obviously a labour of love, the exceptional gift of sympathy and penetrating thought previously shown in the biography of a son-in-law of the subjects of this volume, Michael Lange, for which Miss Bentwich was alone responsible, being again shown. To the general reader the book must give much intellectual pleasure. To those who had the privilege of knowing the Bentwich family circle in Avenue Road the book in itself and in the memories it recalls is a delight. The greater part is written

more for the family and friends than for the general public, but there are two chapters, " Lovers of Zion " and " Maccabaean Pilgrimage " and " From Lover of Zion to Zionism " of wider interest. These tell briefly the story of the development of practical Zionism in Anglo-Jewry and Herbert Bentwich's prominent part in it. Personally he had many disappointments and he died, after he had settled in Palestine, in one of the periods in which the practicability of the Zionist idea was much beclouded. But clouds pass and even death is not the end of an idea. Bentwich's plans for Palestine may still come into favour. Quoting from the book :

" The scheme, as finally adopted by the Zionist Committee, provided for equality of civic rights of all the inhabitants : equality of national and religious groups : recognition of the Jewish population of Palestine as a community with a distinct nationality and religion : the control of all foreign and international relations by the suzerain power : the proportionate representation of the Jewish and non-Jewish population in the local government : the recognition of Hebrew as an official language : the protection of the rights of minorities, and the autonomy of the Jewish population in exclusively Jewish matters. On the side of resettlement the suzerain power was to recognize the desirability of the Jewish return, to remove all restrictions relating to immigration and naturalization of Jewish settlers, and the purchase by them of land in Palestine ; to grant a charter to a Jewish company for colonization. . . . And it might have been better for the peace of Jerusalem if its moderate terms had been adopted."

The book should be of interest to members of the Fund inasmuch as Herbert Bentwich was in his lifetime for long a member of the General Committee and at his death a benefactor. It is produced in Palestine and this perhaps excuses many misprints, but not errors in regard to Anglo-Jewish history or the absence of an index. The illustrations which are well-produced, are interesting.

A. M. H.

The Committee have to acknowledge with thanks the following :

The Expository Times, November, 1940.

Quarterly of the Department of Antiquities in Palestine, Vol. X, No. 1.
American Journal of Archaeology, April–June, 1940.
The American Journal of Semitic Languages and Literatures, July, 1940.
Religions, July and October, 1940.
Scottish Geographical Magazine, November, 1940.
Journal of the Society of Antiquaries of Ireland, September, 1940.
American Journal of Philology, October, 1940.
Harvard Theological Review, October, 1940.
ΝΕΑ ΣΙΩΝ, October to December, 1940.
Jewish Quarterly Review, October, 1940.
Antiquaries Journal, October, 1940.

TRANSLITERATION OF HEBREW AND ARABIC CONSONANTS

HEBREW

Hebrew	English		Hebrew	English	
א	’		כ ך	kh	
ב	b		ל	l	
ב	bh		מ ם	m	
ג	g		נ ן	n	
ג	gh		ס	s	
ד	d		ע	‘	
ד	dh		פ ף	p	
ה	h		פ	f	
ו	v, w		צ ץ	z	
ז	z		ק	k	
ח	h		ר	r	
ט	t		ש	sh	
י	y		ש	s	
כ	k		ת	t	
			ת	th	

ARABIC

Arabic	English		Arabic	English	
ا	’		ض	d	
ب	b		ط	t	
ت	t		ظ	tz	
ث	th		ع	‘	
ج	g	or j in Syrian Arabic.	غ	gh	
ح	h		ف	f	
خ	kh		ق	k	
د	d		ك	k	
ذ	dh		ل	l	
ر	r		م	m	
ز	z		ن	n	
س	s		ه	h	
ش	sh		و	w	
ص	z		ي	y	

Long vowels marked thus :—ā, ē, ī, ō, ū

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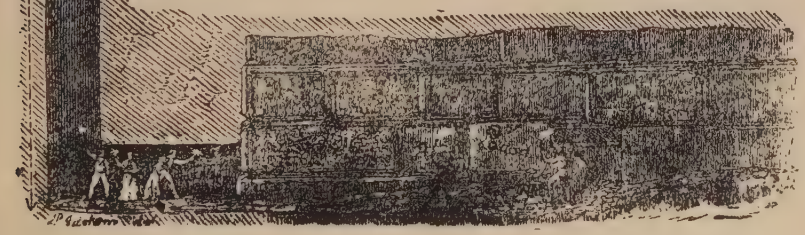

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CONTENTS

PAGE

NOTES AND NEWS 35

ON ANCIENT HEBREW INSCRIPTIONS DISCOVERED AT TELL ED-DUWEIR (LACHISH)—I :
BY DAVID DIRINGER 38

THE NEGEV, OR SOUTHERN DESERT OF PALESTINE :
BY GEORGE E. KIRK 57

REVIEWS AND NOTICES 72

ILLUSTRATIONS

PAGE

On Ancient Hebrew Inscriptions Discovered at Tell ed-Duweir (Lachish)

Plate III: Private Stamps .. .. .. after 38

Plate IV: Incomplete Private Stamps .. „ 46

The Negev, or Southern Desert of Palestine—
Plate V: .. .. „ 58

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS

THOUGH the pursuits of peace may be at a standstill as far as fresh exploration and excavation are concerned, those who are interested in these things are using such leisure as they can find from more urgent tasks, to consolidate and gather up the results of past labours. Work continues at the Institute of Archaeology; inscriptions are being studied, and pottery pieced together. Dr. Diringer has occupied himself in the study and classification of seals and stamps from Lachish, and the first instalment of his studies appears in this issue of the *Quarterly*. Some of the younger archaeologists have written up the record of their exploration of the very important region of the Jabbul, and their paper will be published with illustrations in our next issue.

It is now more than a decade since the Schweich Lectures were devoted to the problems of the book of Isaiah. The late Dr. Kennett, than whom no more stimulating teacher ever filled the chair of Hebrew at Cambridge, gave a series dealing with *The Composition of the Book of Isaiah*, which was a landmark in the historical interpretation of that amazing book, a collection of prophetic utterances ranging over a period of Israel's history covering wellnigh four hundred years. Now, after a lapse of time which has yielded much fresh knowledge of the historical events underlying the book, Professor Sidney Smith, with his unrivalled knowledge of the archaeology and history of the ancient Near East, has taken up the thread where Professor Kennett dropped it, and in this year's series of Schweich Lectures has taken up afresh the subject of the date and unity of what is generally called Deutero-Isaiah. Students of the Old Testament will look forward with great anticipation to the publication of his lectures.

The attention of students may be drawn to a book which was recently reviewed in this journal, Sir Frederic Kenyon's book entitled *The Bible and Archaeology*. In his own words the object of his book " is to lay before such students who are not themselves archaeological specialists the principal results of archaeological research in their bearing on the Bible." Such a book was urgently needed, since the advancement of our knowledge in this field during the last quarter of a century has been almost revolutionary in its bearing on biblical studies. To bring this new knowledge into its proper relation to the old is a matter of primary importance, and it is the task which Sir Frederic Kenyon has set himself. The task has been admirably performed, and the biblical student of to-day could have no better and safer guide to the bearing of Archaeology on the Bible than this modest but invaluable book.

In the current number of the *BASOR* Dr. Nelson Glueck has a very interesting article on Ostraca from Elath, on the site of which at Tell el-Kheleifeh excavations have recently been concluded. In Dr. Glueck's words, " The recently concluded excavations at Tell el-Kheleifeh (Elath) show that the last settlement there extended from about the end of the sixth or the first part of the fifth century B.C. down to the fourth century B.C. Among the ruins of this last period of occupation, which had possibly two phases, were found numerous black-glazed Attic sherds, belonging in the main to the fifth century B.C. They testify to the existence then of a thriving trade between Palestine and Greece, which, to be sure, was already known from other excavations in Palestine and Transjordan. It was not known, however, that this trade extended so far inland and southward, nor that it penetrated, as it must have, into interior Arabia. These Attic sherds, however, reveal trade connections not only between Elath and Athens, so to speak, but also between Arabia and the Aegean area."

Professor Torczyner of the Hebrew University in Jerusalem, who edited the Lachish Ostraca in the first volume of *Lachish*, has now published a Hebrew edition of the ostraca. During the three years since the *edition princeps* was published Dr. Torczyner has taken into account the various articles and

criticisms by other scholars which have appeared in the meantime. He has adopted some of them, but in a number of important cases, such as the question of the identity of the prophet of the Letters, Ginsberg's almost certainly correct interpretation of *hpqḥ* in III, 4, and Albright's reading in V, 9 10, for example, he still adheres to his original view. This is regrettable, and impairs somewhat the usefulness of what is a very handy edition, in spite of the limitations imposed by its being written in Hebrew. We greatly need a similar handy edition in English, for the sumptuous edition of 1938 is quite beyond the means of most students.

ON ANCIENT HEBREW INSCRIPTIONS DISCOVERED AT TELL ED-DUWEIR (LACHISH)—I.

By David Diringer

With the exception of the famous ostraca, commonly known as " the Lachish Letters," most of the ancient Hebrew inscriptional matter from Lachish is now to be seen at the Institute of Archaeology (University of London). This material is the property of the Wellcome Marston Archaeological Research Expedition to the Near East, and I take this opportunity to express my thanks to the expedition for permission to publish these inscriptions, and to Miss Olga Tufnell and Mr. Charles Inge for their great technical assistance. I am also much indebted to the Institute of Archaeology, which has extended hospitality through the kindness of the Secretary, Miss Kathleen Kenyon.

An examination of these inscriptions ([1]) enables me to publish some that are unknown, ([2]) and gives me the opportunity to make an addition to my book on Hebrew inscriptions ([3]) which I hope to publish in a revised English edition when circumstances permit.

(1) STAMPS ON JAR HANDLES.

The magnificent collection of jar stamps from Lachish at the Institute of Archaeology, with those now in the Palestine Museum at Jerusalem, has induced me to prepare a study on ancient Hebrew jar stamps in general, of which this is a preliminary account.

(*a*) *Private Stamps.*

(1) Three beautiful stamps (Grid H.17, Room 1089, No. 7166 ; M. 14 ; D/X, No. 6116) ([4]). No. 7166 is now in the

[1] I will not discuss here the " proto-Canaanite " inscriptions of Lachish.

[2] The unpublished ostraca and the weights will be dealt with in a later issue of the *PEQ*.

[3] *Le iscrizioni antico-ebraiche palestinesi*. . . . R. Università degli Studi di Firenze, Firenze, 1934 ; here abbreviated as *Iscrizioni*.

[4] The numbers refer to the position of discovery on the tell at Lachish, in the following order : Grid Square (see *Lachish II*, Pl. LXXII), Room or Pit, Number, if any, Field Record Number, if any ; D/X signifies that the object is a surface find ; " Palace " is abbreviated in Pal., etc.

PRIVATE STAMPS (DOUBLE SIZE)

Palestine Museum at Jerusalem (Catalogue No. 39.824). Plate III, figs. 1–2.

This mark does not appear in *Iscrizioni*.

Form : Oval (mms. 11 × 8). The inscription is enclosed in an oval, divided into two lines, separated by the usual double stroke.

Inscription : The upper register contains four letters, and there are five below. It reads as follows :

צפנע
=== = צפן עזרידו = " Ṣafan (son of) 'Azaryahu."
זרידו

Prof. G. R. Driver ([1]) rightly emended (*PEQ* LXX, 1938, pp. 190 f.) the first reading of the excavator J. L. Starkey (ibid. LXVIII 1936, p. 188) who had suggested : "for Shaphan the son of Zarijahu."

At least two moulds can be recognized, but all the stamps present the same general characteristics. Most of the letters are typical of ancient Hebrew characters, i.e., the curved *pe* and *nun*, the *zayin* with the small tail on the right of the lower stroke (in many other ancient Hebrew inscriptions the *yod* has a similar characteristic). The *ṣade* has the shape of an ancient Hebrew *shin* turned 90° or that of an irregular Greek *sigma* (Σ), but the upper stroke is a little smaller and not parallel to the lower one. The letter is, however, written facing the same way as the classical Greek letter : see the photograph. The shape of the *nun* differs from that of the *pe* only by a small vertical tail at the top left side, so its form is similar to that of a modern Hebrew *lamed*. The *'ayin* is nearly quadrangular, at least in one stamp. Note the elegant ligature of the last two letters (*he* and *waw*) ; all the other letters of the lower register are also connected, though they cannot be called ligatures.

The first letter of the second name comes at the end of the top register, which is not unusual in ancient Hebrew epigraphy on seals.

The names (*n.p.* and patronymic) are not joined by any

[1] Prof. Driver's basis is *Iscrizioni*, pp. 121 f., stamp No. 4. I do not know the reason for P. H. Vincent's remarks in *RB* XLVIII, 1939, p. 432, n.3. That Père Vincent himself now accepts my reading, is the best evidence that I was correct.

substantive indicating the relationship, such as " son," which is often missing on seals and never occurs on private stamps on jar handles (see, however, stamp No. 14) ; in the latter case it possibly conveyed the name of a firm.

צפן (see *Iscrizioni*, jar handle stamp No. 3) is probably an abbreviated theophoric name, composed of *ṣ f n* (*cf.* the Accadian Ṣapanu : see G. R. Driver, *art. cit.*, p. 191, n.1), " to hide, conceal, occult, shield, protect, etc.", and the divine name : *cf.* for example the Biblical name Ṣefanyahu.

עזריהו = 'Azaryahu (a Biblical name, which occurs on other stamps and seals) ; it means " *YHWH* has helped."

(2) Three stamps (L.15, Pit 46, No. 6366 ; 2 : K.14/J.14, Pal. A.G.). Plate III, fig. 3. Three others from Tell el-Judeideh are published in *Iscrizioni*, jar handle stamps No. 4, and Tav. XIV, figs. 4–5.

Form : nearly oval, size mms. 14 × 11. The stamps do not seem to be from the same mould; however, as only the first one is complete, it is not possible to be sure.

Inscription: surrounded by an oval, and divided into two registers by a double stroke. The upper line contains four letters, the lower one only three. The characters are clear, and the inscription reads :

הושע	" Hosh'a
צפן	(son of) Ṣafan "

The *he* retains the typical Hebrew form, the upper stroke passing over the vertical one. The *waw* seems to be written in two ways ; on the better stamp it consists of a long stem, with an enlarged head intersected by a small stroke. The *shin* is very tall, while the *'ayin* is rather small. The three letters of the lower register are larger. The *ṣade* is similar to that of the stamp already discussed, but here it is more oblique. The *pe* is squat and is connected with the *nun* as it was in the preceding stamp.

הושע, the well known Biblical name *Hoshea*, occurs also in the seal 46 *Iscrizioni*. It is an abbreviated divine name connected with *y sh '* (" to help, save, liberate, etc.").

The *n.p.* צפן has already been mentioned.

(3) Seven stamps (K.14/J.14. Pal.A.G.; J.16; L.14; L.15; D/X/No. 6115; Q.17; and H.17 Room 1089, No. 7167, now in the Palestine Museum, Catalogue No. 39.825). Plate III, figs. 4–6.

This mark does not appear in *Iscrizioni*.

Only the stamp in the Palestine Museum and two others are perfect. The remainder were imperfectly stamped in one part or other, but at any rate they are complementary.

Form: oval, size mms. 12 × 9.

Inscription: enclosed in an oval line with the usual double stroke. The upper register contains four letters, the lower five. It reads as follows:

משלם = "Meshullam"
אחמלך = (son of) Aḥimelek"

Note the characteristic shape of the *mem*, the *ḥet* with only two horizontal strokes, and the *kaf* which is unfinished at the bottom owing to lack of space.

Both the names are Biblical, they also occur in other ancient Hebrew inscriptions. For משלם *cf. Iscrizioni*, seals No. 55 and 56; for אחמלך the ostraca from Samaria, No. 22–29 and 48, and the seal from Lachish published by Hooke *PEF QS* LXVII, 1935, pp. 195 ff. As to the meaning of the names *cf. Iscrizioni*, pp. 41 and 213.

N.B. No stamps of this type were previously known, but as not less than seven stamps of this kind have been recovered from the same locality, it would seem that the factory was important, or that it was situated in the district.

(4) Seven stamps (4: D/X, No. 6118; 2: H.17, Road, 1072, No. 7070; 1: R.16). Some of the stamps are more or less clear, others can be deciphered only by comparison. Plate III, fig. 7.

This mark does not appear in *Iscrizioni*.

Form: nearly circular; diameter: about mm. 12.

Inscription: enclosed in a circular line, and divided by a double stroke. The upper register contains five letters, the lower only three. The signs are not clear, but the reading is certain:

לתנחם " (belonging) to Tanḥum

מגן "(son of) Magen" or "from Gan"

The characters are very rough, nearly all the letters are irregular, particularly the *nun*, the *gimel* and the *lamed*. The form of the *mem* is also characteristic.

תנחם does not appear in the Bible or in any ancient Hebrew inscription. But the feminine name Tanḥumet occurs in the Old Testament, and has been interpreted as "consolation, comforter." This consolation referred to the birth of a child in place of a member of the family previously deceased. The masculine name Tanḥum appears in post-Biblical literature (Tanḥuma bar-Abba). In *Iscrizioni* seal 64, there is the feminine name מנחמת, and in the Bible there are the forms Naḥum, Naḥam, Menaḥem, etc. (the same names occur in ancient Hebrew inscriptions): all from the root *n ḥ m*= "console, have compassion, etc."

The explanation of the second line of the inscription is more difficult. It can only be read *m g n*, and its interpretation is not clear. Two solutions are possible, either it is a patronymic as on other stamps, or a locality *Gan* preceded by the preposition *m*="from."

(a) The name *Magen* would be new, but its interpretation is easy: it would be an abbreviation of a theophoric name, compounded with the divine element and the predicative *magen*, "defence, protection," (="God is defence"), similar to other theophoric names composed with elements which mean "help" (עֶזֶר, שׁוּע, etc.), "salvation, refuge" (פֶּלֶט), "rock, wall, fortress" (צוּר, שׁוּר מָעוֹז etc.), "strength" (עֹז, חֶזֶק, etc.). See also M. Noth, *Die israelitischen Personennamen im Rahmen der gemeinsemitischen Namengebung* . . . , 1928, pp. 154 ff.

(b) The indication "from Gan" would be unusual, though it does occur in the Samaria ostraca. I certainly prefer the first solution.

N.B. Taking into consideration the relatively high number of these stamps, and the rather rough material employed and the ungainly letters, I presume that though the factory in question was important, it made cheap articles.

(5) A stamp on one handle of a restored jar (G.14, Room 1008, No. 5400) : see also Mr. Charles H. Inge's *Postscriptum* ot this article, (to be published in the next issue of the P.E.Q.) Plate III, fig. 9.

This mark does not appear in *Iscrizioni*.

Form of the stamp : oval, nearly circular ; size : about mms. 15 × 14.

Inscription : Enclosed in a nearly circular double line, and divided into two registers, separated by the usual double (here quite irregular) stroke. Beneath the lower register there is another stroke, a single one, which never occurs in other stamps or seals. Not all the characters are very clear. But it seems that the only possible reading is as follows :

לשלמ(ה) " belonging) to Shelomoh (or Shallum or Shillem)

אחסמך (son of) Aḥisamak "

The two *lamed* are not identical : the first has an angular base, the second is nearly round. The *mem* is rather irregular, particularly at the base. There appear to be traces of another letter after the *mem* : it may be a *he*, but it is quite possible that there is a vertical stroke to fill the space, *e.g.*, in the seals *Iscrizioni*, No. 53, 56, 62 (two strokes), etc.—The first sign on the second line can only be *alef* : the original clearly shows the ends of the two horizontal strokes, but these are not too plain on the photograph. As to the *ḥet*, it is uncertain if there are two or three strokes : it seems to me that there are three. The third character appears to be an *alef* similar to the first sign of the same line. But a strict comparison of the two characters and particularly the contents causes me to read the second of them as *samek*. The following letter is clearly a *mem*, but its shape is quite different from that of the upper register. After the *mem* there is the tail of a letter, *waw*, *kaf*, or *samek* : probably a *kaf*.

As to the names :

שלמה : If this reading be right, it is the only example in existence amongst ancient Hebrew inscriptions of the name of King Solomon in its Biblical form. Otherwise we have the name Shallum or Shillem, already known from the Bible and from some ancient Hebrew seals and stamps : see *Iscrizioni*, seals No. 58 and 75, stamps No. 10 *a* (pp. 341 ff.), 29 *c* (p. 343). As to the meaning of the name see *Iscrizioni*, p. 213, n.2.

אחסמך is the Biblical name Aḥisamak (אֲחִיסָמָךְ, *Ex.* 31 6, 35 34, 38 23)=" my brother is support." Dr. Reifenberg is right when he remarks (*PEQ* LXX, 1938, p. 113) that " Hebrew סמך apart from its general meaning is especially used in sacrificial language."=*Cf.* also the Biblical name Semakyahu and the *Eleph.pap.* name סמכי. The name סמכיהו occurs also in the " Lachish letters." We have finally the name אלסמכי in a seal published by A. Reifenberg (*l.cit.*). The word סמך appears in the Tell el-Ḥesy fragment (see : *Iscrizioni*, Miscellanea No. 10, and S. H. Hooke, *PEF QS* LXVIII, 1936, p. 38).

(6) Seven stamps (3 : K./14/J.14 Pal.A.G. ; 3 : D/X ; 1 : H.17, Room 1089, No. 7161). Plate III, figs. 10–11.

This mark is already known : see *Iscrizioni*, jar handle stamp No. 7, and Tav. XIV, fig. 9.

Form : irregular rectangle, or trapezoid. Size : mms. 15 × 9 approx. It is quite different from all other jar handle stamps found in Palestine.—Various wares and colours (red, yellow, grey, grey inside and red out, etc.).

Inscription : Enclosed in a rectangle, also irregular ; a single stroke divides the two registers. Both lines contain four letters each. The characters are not very clear, but the stamps complete each other. The inscription reads as follows :

לנחם " (belonging) to Naḥum
עבדי (son of) 'Abdy

Though the stamps seem to have been made from two or more moulds, the letters present the same general characteristics : the *lamed* is not very regular, but it seems to have an angular base. The *ḥet* is usually so badly preserved that its exact form is doubtful, but one stamp shows that it had only two strokes. The *mem* is like a large *pe* with two short vertical tails at the top left side. The *'ayin* has a curious shape, like a C, or a reversed D open in the middle of the vertical side. The *bet*, as usual in the cursive script, is curved not angular, though it is not very regular. The shape of the *dalet* is very strange, it is like an irregular A: see the photograph. The *yod* is also noticeable ; the upper and lower strokes are more oblique than the central one, which is sometimes parallel to them and

sometimes even more slanting ; the vertical stem is upright and diagonal to the others, and the lower stroke extends from the top to the bottom of the letter. As to the names : both of them are Biblical names and their meanings are quite clear ; see also *Iscrizioni*, p. 125.

N.B. The general characteristics of this mark induced nearly all scholars, particularly the great epigraphist M. Lidzbarski, to consider this inscription as post-exilic. However I preferred to include it in my collection, as I was not convinced that the form of the letters was sufficient to place the inscription in that period. Now the problem is solved. Miss Olga Tufnell informs me that not only is the ware of the pottery apparently pre-exilic, but one stamp *at least* was found in a room which formed part of a row of shops inside the city gate, destroyed by fire about 597 B.C.

(7) One stamp (P.17, Great Shaft, level 255, 5 m.). The lower part is missing, but it appears to me that the inscription is intact. Plate III, fig. 8.

This mark does not appear in *Iscrizioni*.

Form : oval, original size : circa mms. 15 × 9.

Inscription : Enclosed in an oval line (of which only a small part remains), is divided into two lines, but the second line consists of only one letter. It reads clearly :

לעבד = " (belonging) to 'Abdy "

The letters are beautiful, and well preserved, except the *yod*, of which the lower stroke is missing. Note the elegant ligature of the *bet* and *dalet*. In general it seems to be one of the finest stamps among those recovered from Palestine.

Compare the *n.p.* עבדי with that of the preceding stamp.

We have here the only case in ancient Hebrew jar handle stamps, of a singular name (preceded by the possessive *lamed*), and it possibly concerned a very well-known person.

It is quite likely that the owner of this factory was the father of the man mentioned on stamp No. 6.

(*b*) *Incomplete Private Stamps or those with Uncertain Letters.*

Besides the preceding private stamps with more or less

certain readings, there are various private stamps with incomplete or indecipherable inscriptions.

(8) One stamp (K.14/J.14, Pal.A.G.). The mark has not been well stamped, actually the left side is missing. Plate IV, fig. 1.[1]

This mark does not appear in *Iscrizioni*.

Form : Oval ; original size apparently : mms. 12 × 10.

Inscription : Enclosed in an oval, and divided into two lines, separated by the usual double stroke. The upper line is complete, while in the lower line the final part is missing. However, probably only one letter is missing and the completion of the final letter is lost. The whole inscription reads probably :

לשבנ
אשח(ר)
מ

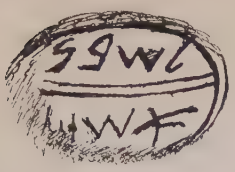
The letters which are preserved, with the exception of the last one, are all clear and precise. The *lamed* is round at the base, while the main stem passes over the oval line. The first *shin* is not very regular at the right side. The *bet* is rather angular. The *nun* and the *alef* are also characteristic. The *shin* of the second line is more regular and wider than the other one. Only the top remains of the final letter : graphically it could be a *ḥet* or a *mem*. The last letter, not preserved, was perhaps a *resh*.

The first letter of the second line can belong to the name in the first line or to that in the second one. Thus, the *n.p.* of the potter is Sheben or Shebna : that alone of the inscription is certain. The rest is merely hypothesis, more or less reasonable. One can therefore suggest :

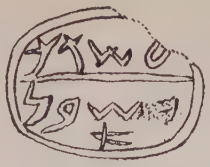
(1) לשבן אשחר = "(belonging) to Sheben (son of) Ashḥur."
(2) לשבנא שחר = "(belonging) to Shebna (son of) Shaḥar."
(3) לשבנא שמר = "(belonging) to Shebna (son of) Shamar."

Other hypotheses could be advanced, but they would be superfluous, for they would not rest on a firm foundation. The most likely seems to be the second hypothesis.

[1] Drawing made by Mrs. David Diringer. The drawings Plate IV, figs. 2–10, have been made by Miss Olga Tufnell, the drawing Plate IV, fig. 11, by Mrs. Diringer.



1



2

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7

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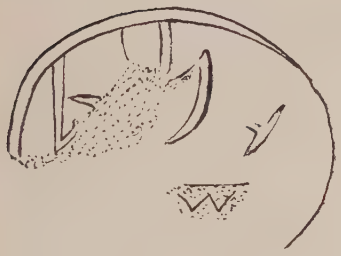
9



10

11

INCOMPLETE PRIVATE STAMPS OR THOSE WITH UNCERTAIN LETTERS
(1—10: DOUBLE SIZE ; 11 : ORIGINAL SIZE)

As far as the *n.p.* שבן or שבנא is concerned, it would be an abbreviation of a theophoric name, analogous to, or identical with, the Biblical name Shebenyahu (see *Iscrizioni*, p. 180). In its various forms—שבניהו, שבניה, שבניו, שבני, and שבנא—this name is one of the most frequent in ancient Hebrew inscriptions. For the form שבן *cf.* the next stamp, while שבנא occurs on a seal also found at Lachish (see the second part of this article to be published in the next issue of P.E.Q.

שחר would be an abbreviation of a theophoric name (analogous to, or identical with, the Biblical name Sheḥaryah ; *cf.* also the Biblical name Aḥishaḥar), compounded with *shaḥar* (="dawn") and a divine constituent : "God is dawn."

אשחר=Ashḥur, a Biblical name. (1 *Chr.* 2 24, 4 5), perhaps a trib. name (*cf.* Noth, *op. cit.*, p, 238), but more probably a theophoric name, compounded with *Ḥur*.

(9) One stamp (D/X, J.15, No. 6119). Plate IV, fig. 2. This mark does not appear in *Iscrizioni*. Form : oval ; size : mms. 14 × 10.

Inscription : Surrounded by an oval line, and divided into two registers, separated by a single stroke. The inscription consists of two lines, or rather three lines, but this third line has only one letter. A small part is missing at the top right, so that only a little piece of the first letter is preserved at the bottom. The whole stamp probably reads :

ל שוכ

——

השבנ

א

The first sign could be, from the graphic point of view, either a *lamed* or an *'ayin*, but the first reading is preferable from the point of view of the contents. The first letter of the second line is also not very clear, but it is probably a *he*. Observe the appendage at the bottom left of the *shin* of the first line. The letter of the third line is certain : it is an *alef*, incised (for lack of space in the second line) below the *shin* : for similar cases see *Iscrizioni*, seals No. 54 (Tav. XX, fig. 24) and 66 (Tav. XXI, fig. 3), and also the stamp No. 7 of this article.

If this reading be right, there is here the *n.p.* Sokoh, preceded by the possessive *lamed*, and followed by the patronymic Shebna.

שׂוֹכֹה (or שׂוֹכוֹ) generally appears in the Bible as a *n.l.* (*cf.* *Iscrizioni*, p. 149), and only once (1 *Chr.* 4 18) as *n.p.*, and also here it may be a *n.l.* because the Biblical commentator in the compilation of the genealogical tree of the sons of Jacob (1 *Chr.* 2 ff.) frequently used the names of towns and villages. However Sokoh may have also been a *n.p.*, for which this stamp could be the best evidence. In any case, it is a name derived from a *n.l.* analogous to the names mentioned by Noth, *op. cit.*, p. 232. I believe that the contents of this stamp is not connected at all with that of the Sokoh royal stamps, but naturally other explanations may not be entirely excluded.

For שבנא *cf.* the preceding stamp.

(10) One stamp (D/X, No. 6117). Plate IV, fig. 3.

This mark does not appear in *Iscrizioni*.

Form : oval; size : mms. 12 × 10 approx. The seal has not been well stamped at top and bottom, but there is nothing missing of the inscription.

Inscription : Is enclosed in an oval, and divided into two lines with the usual double stroke between them. Not all the letters are decipherable. With certain reservations, I would suggest the following reading :

לנחמ

הצליהו

In the first line, the following seem to be certain : the *lamed*, the *ḥet* and the *mem* (even though the top is not intact). The second letter resembles a *pe* with a little line at the top left : it is, however, more probable that it is a *nun*. In the second line I see clearly : the *he*, the *lamed*, and the *yod*. The second letter seems to me a *ṣade*. The end is very uncertain, in my opinion it can only be a ligature of *he* and *waw*.

Given a doubtful reading for four letters, the decipherment of the names is naturally uncertain. As an hypothesis, I think that one could read : *Le-Neḥamah* (daughter of) *Ṣeliyahu*.

נחמה is a modern Hebrew feminine *n.p.* ; in the Bible it is only found in its masculine equivalent : see stamp 6 of this article.

צליהו does not appear in the Bible, but the interpretation does not present much difficulty. The most simple explanation would be " shadow of *YHWH*," but it is perhaps more likely, that we have to do with an abbreviation of בצליהו which would be parallel to Beṣalel (*Ex.* 31 2, 35 50, etc. ; 1 *Chr.* 2 20 ; 2 *Chr.* 1 5, etc.). For the interpretation of the name, we return to Noth : according to him the holder of the name is described as " im besonderen Schutze der Gottheit stehend, vgl. Ps. 91, 1, wo צל parallel zu סתר als ein Bild für die sichere Geborgenheit steht, für das Bewahrtsein vor Schaden und Gefahr, wie sie die Sonnenglut mit sich bringt, vor der man in den Schatten flieht " (*op. cit.*, p. 152).

N.B. In the event of my reading being correct, it would be the only case among ancient Hebrew inscriptions of a woman's jar handle stamp, while among the seals three examples are known.

(11) One stamp (L.15). Plate IV, fig. 4. Form : oval; size : mms. 14 × 12.

Inscription : Is enclosed in an oval, and divided into two lines, separated by a double stroke. The reading is rather uncertain. The preserved part of the inscription reads probably as follows :

לש - - -
=====
שבניה

The first two letters of the first line are certainly *lamed* and *shin*, though not so clear as in the drawing. It seems superfluous to make any suggestion for the completion of the name (it may be Shallum, or Sokoh, or Shaḥar, or Shemaryah, etc.). The second line is decipherable ; it may be possible to read : שבניה ("Shebenyah"). At any rate it is certain that the potter belonged to the family of Shebenyahu.

(12) One stamp (D/X). Plate IV, fig. 5. This mark does not appear in *Iscrizioni*. Form : roughly circular (diameter : circa 12 mm.).

Inscription : Is enclosed in a circle, and divided into two lines, separated by a double stroke. The reading is very uncertain. In the first line it seems to be שבנ ; and traces of the

two following letters probably indicate *y-h*. The second line is very badly preserved : at the end of the line there are to be seen traces of apparently *yod*, *he* and *waw* (the end of a Yahwistic name), which are preceded by traces of two letters : the first may be *yod* or perhaps *zayin*, the second one would be a *waw* (graphically very probable, but not so for the contents) or—which would suit better the contents—the remainder of a *resh* or *ḥet*; while at the beginning of the line there is a lacuna for a letter, which could be the completion of the first name or the beginning of the second one : in the first case it would be a *waw*, in the second perhaps an *'ayin*. The first hypothesis is preferable to the second : in the first case both of the names would end in *-yhw*, while in the second case one would end in *-yh*, and the other one in *-yhw*, which would be rather unusual. As to the first hypothesis *cf. e.g. Iscrizioni*, seal No. 51, p. 208, n.2, *c*.

At any rate, the whole inscription will probably read :

שבניה(ו) or שבניה = "Shebenyah[u]" (son of) "Jehiyahu" or "'Azaryahu."
יחיהו(ו)

While in the last case we should have to deal with a mark similar (but from a different mould) to *Iscrizioni*, stamp No. 5, in the first hypothesis, which I prefer, we should have a quite new mark and a new name. In either case, the *n.p.* of the potter is certainly the most frequent amongst the potters mentioned in the early Hebrew jar-handle stamps.

As to the names :

For שבניה(ו) see above, stamp No. 8.

For זריהו(ע) see above, stamp No. 1.

יחיהו, although a new name in early Hebrew inscriptions, would be the full form of the Biblical name יְחִיָּה (1 *Chr.* 15 24) and parallel to another Biblical name יְחִיאֵל (*Esr.* 8 9, 10 2 21 26 ; 1 *Chr.* 15 18 20, 16 5, 23 8, etc.). The meaning of the name would be "*YHWH* lives" (*cf.* also Lachish letters III, 9 ; XII, 8 ; and VI, 12/13). According to Noth's opinion (*op. cit.*, p. 206), this name would express the wish that " die Gottheit sich lebendig erweisen, sich wirksam, d.h. wohl vor allem hilfreich betätigen möge."

(13) One stamp (D/X). This mark does not appear in *Iscrizioni*. Form nearly circular; diameter: circa 12 mm.

Inscription: Enclosed in a circle, is divided into two registers, separated by a double stroke. Most of the letters can be seen, but they are in such a bad state of preservation that decipherment is impossible. It may be that we have to do with a stamp belonging to the group *LTNHM MGN* (see above: stamps No. 4), but it is difficult to affirm it with certainty or even probability.

(14) One stamp (H.17). Plate IV, fig. 6. This mark does not appear in *Iscrizioni*. Form: almost circular; diameter circa 12 mm.

Inscription: Enclosed in a circular line, is divided into two parts, separated by a double stroke. Not all the letters can be recognized with certainty. In the first line we see: a *lamed*, a *pe*, a *nun*, perhaps a *mem* or *bet*, at the end another *nun*. In the second line: the first letter and the last two are quite clear: *yod* (at the beginning), *nun* and *yod* (at the end). Between the first *yod* and the *nun* there is a lacuna, either for one letter or for two. I believe that it may be a *het*.

In such case the most probable reading for the whole inscription would be:

לפן בן
יחני

Apart from the singularity of the names, there would be here the only case among early Hebrew inscriptions of a jar-handle stamp with the *n.p.* and patronymic joined by the word *ben* ("son").

פן would be an abbreviation of a theophoric name analogous to, or identical with, the Biblical name פְּנוּאֵל (or פְּנִיאֵל): its meaning is, however, rather obscure.

יחוני would be connected with the root חנן "to have mercy, to show grace, to commiserate, etc.": *cf.*, the names חַנִיאֵל, חניה (Eleph.), חַנָּה, יחונן (Eleph.), חֵן, etc.

(15) Two stamps (Q 17, Room H: H.17). Plate IV, fig. 7.

This mark does not appear in *Iscrizioni*.

Form : Almost circular , diameter : circa 12, 5 mm. The mark has been badly impressed in both of the stamps. In both of them there are to be seen : part of the circular line which encloses the inscription, the double line which separates the two lines, and some letters.

Inscription : First line : *kaf* ; a letter, very badly preserved, which I believe to be *resh* ; *mem* ; *yod*. Second line : *yod* ; *pe* ; the end of the patronymic seems to be *y* (quite clear)—*h*—*w*. Thus, with all reservations, I would suggest the reading :

כרמי "Karmi
יפיהו (son of) Jofiyahu"

The name, כרמי, *Karmi*, occurs in the Bible (*Gen.* 46 9 ; *Ex.* 6 14 ; *Num.* 26 6, etc.) : he is a son of Reuben. It has been generally considered as a tribal name (*cf.*, for example, Noth, *op. cit.*, p. 248), but it is quite possible that it was also a *n.p.* The meaning is clear : " My vineyard, my garden, my orchard, etc.," and the name is easily explained by the importance of the vineyard in ancient times, especially in the Near East.

יפיהו would be a new name, but explicable : it would be composed of יְפִי (*i.p.* יפי)=" beauty," and the divine name.

(16) One stamp (D/X). This mark does not appear in *Iscrizioni*. Form : oval ; size : uncertain.

Inscription : Was originally enclosed in an oval line, and divided into two registers by a double stroke : only insignificant traces remain of the oval line, of the double stroke, and of the inscription. First line : a *nun* or *mem*, and traces of a *shin* and a *lamed*. Second line : a *taw* or *alef*, a *ḥet*, an *alef* or *samek*, and a *nun* or *mem*.

It is highly probable that this mark is analogous to the above stamp n.5.

(17) One stamp (D/X). This mark does not appear in *Iscrizioni*. Form : oval ; size : uncertain.

Inscription : Originally surrounded by an oval line, and divided into two lines, separated by a double stroke. There

are only traces of several letters : in the upper line, one can recognize, with some difficulty, a *kaf*, a *nun*, a *bet*, a *mem*.

(18) One stamp (G.17). This mark does not appear in *Iscrizioni*. Form : oval ; size uncertain.

Inscription : Was originally divided into two lines, separated by a double stroke. Only the very lightest traces are preserved ; not one letter is clear.

(19) One stamp (Pal., Room B). Plate IV, fig. 10. This mark does not appear in *Iscrizioni*. Form : Roughly circular ; diameter : about 18 mm. This stamp is muchlarger and quite different from all the other stamps.

Inscription : Enclosed in a circular line. A few letters are distributed in a very irregular fashion. At the top *mem* and *lamed* (left) are fairly clear ; below at the right (but in much smaller character) there is a *shin* ; finally one might recognize in the centre to the right, traces of another letter, perhaps a *yod*.

With much imagination one might perhaps read ירו(ר)שלם; (Jerusalem), but the only certainty is שלם. If, however, the reading *Y—r—sh—l—m* is correct, it might be a variation of the stamps *Iscrizioni*, Group No. 15 (pp. 130 ff.), stamps which are presented in quite a different form (the letters are enclosed in a pentagram), and which have been much discussed (Albright, Sukenik, and others).

(20) The upper part of a handle with a fragment of the upper part of the jar. D/X. Plate IV, fig. 11. This mark does not appear in *Iscrizion*. Colour : grey.

On the handle there has been incised, before firing, an irregular figure (size : maximum height and width, in mms. : 15 × 21), which represents either some uncertain decoration (an irregular trefoil for example), or a combination of some irregular letters. In the first case this mark would belong to our Group *e*) of the jar-handle stamps from Lachish (to be published in the next issue of the *P.E.Q.*), while in the second case would belong to this group.

Inscription : In case this mark bears an inscription, we would have a kind of monogram of the following letters : *resh* (or *dalet*), *kaf* (or *waw*), *'ayin* (or *dalet*), and finally *shin*, which passes over the other signs. But there can be naturally

many other explanations, and under these conditions it seems superfluous to suggest any interpretation.

(21) A very interesting stamp is the mark D/X, No. 6120. Plate IV, fig. 8. This mark does not appear in *Iscrizioni*.

Form : oval ; size : mms. 14 × 12. Impression very delicate and elegant, but very badly preserved.

Decoration : The stamp is enclosed in a double line, and is divided into two unequal registers. The upper one, which is bigger than the other, contains a scarab with four outspread wings.

Inscription : Below, in a single line, and some letters scattered between the wings. The letters are not very clear, but mostly certain. Between the upper wings there are visible two letters : the first one is quite clear : it is a *lamed*, the second one seems to be a *samek* ; there follows a lacuna for a letter. Between the left wings there is a clear *kaf*, and between the right wings a probable *yod*. The lower register contains probably the letters : *ṣade* (as in the stamps No. 1 and 2), *pe*, *nun*, *yod*, *he* and *waw*, but the first four are uncertain. Thus with some reservation, I suggest the reading :

לס(מ)כי "(belonging) to Samki
צפניהו (son of) Ṣefanyahu"

As to the names :

סמכי : *cf.* the name אחסמך in the stamp No. 5.

צפניהו : *cf.* the name צפן in the stamp No. 1.

(22) D/X. A similar, but not identical with the precedent one. Plate IV, fig. 9. This mark does not appear in *Iscrizioni*.

Form : oval ; size : mms. 15 × 13. This mark is also very delicate and elegant ; its preservation is still worse than that of the precedent stamp.

Decoration : Similar to that of the stamp No. 21, but the emblem is unlike.

Inscription : Below, in a single line, there are visible : the remainder of a letter, perhaps a *ṣade* ; three clear letters : *pe*, *nun*, *yod*, and some slight traces of the next character. Thus, the whole inscription reads :

צפניה "Ṣafanyah"

The inscription is perhaps identical with that of the preceding stamp, but without the letters between the wings, of which there are not any traces. Thus, unless the absence of those traces is caused by the bad preservation of the mark, it is quite possible that the potter in question was the father of the potter mentioned in the preceding stamp.

N.B. These two types of stamps are, as it were, the missing link between the private and royal stamps ; in fact, we find here a private name on one hand and on the other an emblem : the scarab.

PRIVATE STAMPS FOUND AT LACHISH : SUMMARY.

No.	Mark.	Number of the stamps found at Lachish.	Published in *Iscrizioni*
1	צפן עזריהו	3	= =
2	הושע צפן	3	Stamps No. 4 (3 stamps).
3	משלם אחמלך	7	= =
4	לתנחם מנן	7 (see also No. 13).	= =
5	לשלמ(ה) אחסמך לנחם עבדי	1 (see also) No. 16).	= =
6		7	Stamp No. 7 (1 stamp).
7	לעבדי	1	= =
8	(Uncertain reading) לשבנא שח(ר)	1	= =
9	,, ,, לשוכה שבנא	1	= =
10	,, ,, לנחמה צליהו	1	= =
11	לש - - - שבניה	1	= =
12	שבניה עזריהו or שבניהו יהיהו	1	= =
13	Indecipherable (perhaps analogous to No. 4)	1	= =
14	Uncertain reading : לפן בן יחני	1	= =
15	Uncertain reading : כרמי יפיהו	1	= =

No.	Mark.	Number of the stamps found at Lachish.	Published in *Iscrizioni*
16	Uncertain, perhaps analogous to No. 5	1	= =
17	Indecipherable	1	= =
18	Indecipherable	1	= =
19	Uncertain reading : ישלם(ר)	1	= =
20	Indecipherable	1	= =
21	Probably : לסמכי צפניהו	1	= =
22	Probably : צפניה	1	= =

(*To be continued*)

THE NEGEV, OR SOUTHERN DESERT OF PALESTINE

By George E. Kirk

The present article was inspired by reading Major Jarvis's genial paper "To Petra from the West" in the July, 1940, number of *Antiquity*, and my justification for writing it in wartime is twofold. Firstly, because there are current misconceptions about the physical geography and historical significance of the Beersheba sub-district of Palestine which have bearing on recent politics; and secondly, because I am acquainted with a quantity of unpublished material about this region, which it is desirable to place on record in these uncertain times, in the hope that it may be available for future research.

The elongated triangle of South Palestine between Gaza, the Dead Sea, and the Gulf of Aqaba is a historical accident produced by the arbitrators who fixed the frontier between Palestine and Egypt in the last century. It is not a geographical unity, and has no single Arabic name. Administratively it is known as the Beersheba sub-district, and recent Jewish writers have revived the old Hebrew appellation *Negev*, meaning "The Dry," applied vaguely to the lands south of Beersheba.

Geographically it is a continuation of Palestine proper. From the Mediterranean, a slope of chalk and limestone rises eastwards to a crest between 2,000 and 3,000 feet above sea-level. Its original connection with the mountains of Transjordan was interrupted by the formation of the rift-valley of the Jordan, the Dead Sea, and Wadi Araba. Parts of the latter are below sea-level, and its highest point is only a few hundred feet above sea-level. Its scarps to east and west are very precipitous. These rocky walls are cut through by the gorges of torrents which only occasionally carry water at the present time; but in the prehistoric past a far greater volume of water has lowered their beds hundreds of feet below the surrounding hills. The western counterscarp which slopes from the watershed down to the Mediterranean is much less steep, and con-

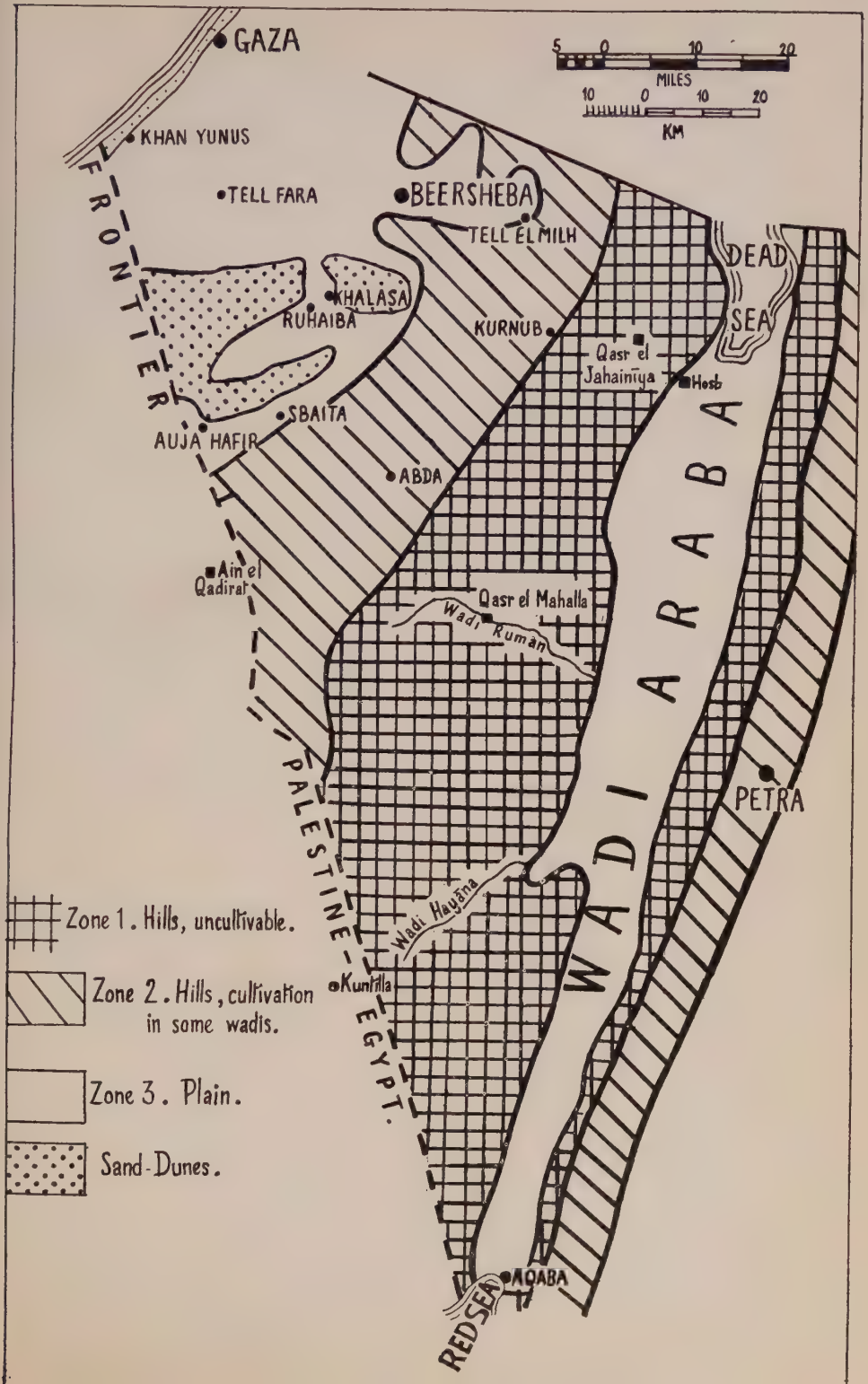
sequently the watercourses have not dissected the country so deeply. In the extreme south of the Negev towards Aqaba the limestone gives place to the volcanic formations of the Sinai Peninsula.

The climate resembles that of Syria and Palestine, but is more extreme. In the winter, depressions from the Atlantic, having travelled the length of the Mediterranean, are cooled by their passage over the Lebanon and Anti-Lebanon and the highlands of Palestine and Transjordan and deposit most of their remaining moisture there. The valley of the Jordan, the Dead Sea, and the Araba is, however, so much warmer than the highlands to east and west that very little condensation occurs over it, and its rainfall is almost nil. Moreover, the mountain chain of the Negev being on the whole lower than that of Palestine proper, and its winter temperature being somewhat higher, the Negev receives less rain than Palestine. Statistics are available for the last few years only, but it is clear that even in the comparatively favoured north-west of the Negev, ten inches is an unusually good winter's rainfall, that five to seven inches is an average for that area, and that a bad winter may produce only two to three inches. The summer is rainless, and the winter rainfall diminishes as one goes east and south from Gaza or Beersheba towards the Araba and Sinai. Besides being small, the rainfall is very variable from one winter to another, as the above figures show.

In these semi-desert conditions the following subdivision of the Negev into three natural zones from east to west should be self-explanatory :

Zone 1 : The steep scarp west of the Araba has lost practically all its soil as a result of thousands of years' erosion by wind and water, and the hills present a bare, pale aspect, such as one might expect to find on the Moon. The wadis have carried most of the soil down to the Araba, but have retained some in their beds, where it bears scanty xerophile scrub. This provides winter pasture, for the goats and camels of a few poor small tribes, but agriculture is excluded, and the population reduced to the absolute minimum by the extreme scarcity of water.[1]

[1] I have crossed the " boundary " between Zones 1 and 2 six times, four times near Kurnub and twice near Abda. Modern cultivation and traces of former cultivation came to an end just at this "boundary."


GAZA
KHAN YUNUS
TELL FARA
BEERSHEBA
TELL EL MILH
DEAD SEA
KHALASA
RUHAIBA
KURNUB
Qasr el Jahainiya
Hosb
SBAITA
AUJA HAFIR
ABDA
Ain el Qadirat
Qasr el Mahalla
Wadi Ruman
PETRA
Wadi Hayana
Kuntilla
AQABA
RED SEA
FRONTIER
PALESTINE-EGYPT.
WADI ARABA
5 0 10 20
MILES
10 0 10 20
KM
Zone 1. Hills, uncultivable.
Zone 2. Hills, cultivation in some wadis.
Zone 3. Plain.
Sand-Dunes.

Zone 2 : The counterscarp on the western side of the Mediterranean-Araba watershed. The erosion of the hills has progressed as far as in *Zone* 1, but the gradient of the wadis is much less steep, and consequently they have retained a greater depth of soil. The greater rainfall on this side of the watershed permits pasture on a larger scale, and some agriculture in the wadis, though this is made precarious by the uncertainty of the rainfall.

Zone 3 : The peneplain of the north-west has been enriched by the soil eroded from *Zone* 2. It is a region of combined agriculture and pasture, though the rainfall is still a factor of the greatest importance. A block of shifting sand dune covers a part of this comparatively fertile zone. Excavation has shown that there was already sand at Khalasa in the third to fourth century A.D.

In the last few years the Development Department of the Palestine Government has begun to investigate the possibility of irrigating this zone from deep subterranean water-supplies. The work of the government geologist, Mr. Blake, was interrupted by the temporary withdrawal of government authority from the Negev in the summer of 1938. Mr. Blake himself was killed by Arabs near the southern end of the Dead Sea in the summer of 1940, and his work is unhappily incomplete. It appears, however, that water was not always found where it was expected, and that in general its saline content was high, so that the prospects for irrigation from this source do not seem to be bright.[1]

The population of the Negev, which is composed entirely of Arabic-speaking Moslems, also falls into three distinct groups, though their localization does not quite coincide with the natural zones just described :

(1) The eastern wadis are inhabited solely by one or two poor tribes of Bedouin, numbering perhaps only a few hundreds, who live by their herds of goats and camels. It has already been said that agriculture is impossible in this zone. It is not surprising that Major Jarvis crossed this region from Kuntilla to the Araba without meeting anyone. I have had the same experience in spring journeys from Kurnub to the

[1] The failure of attempts to irrigate with water of excessive salinity is described in Ellsworth Huntington's *Pulse of Asia*.

Araba and from the Araba almost to Abda. *Zone* 1 is practically an " empty quarter."

(2) Though the inhabitants of *Zone* 2 call themselves, and are called by others " Bedu," they are not strictly Bedouin, since they practise agriculture to a greater or lesser extent, and their herds are chiefly goats and sheep, with only a few camels. Being dependent on these herds, they move their tents from one camping site to another within fairly circumscribed areas, and return to their patches of ploughland only at seedtime and harvest. Their chief crops are barley and wheat, with smaller crops of onions, tobacco, and melons. The title of a tribe or family to a piece of ploughland depends on oral tradition, but has legal sanction in the tribal courts, though in the past it has naturally changed as a result of tribal wars. Though the great majority of these people live in tents, the Riyatiya of Khalasa spend part of the year in houses built of stones from the ancient town, have their own Koran schools, claim descent in about the fifth generation from a Turkish postman from Aleppo, and admit that they are half-peasants. To my knowledge both they and a family in Wadi Abu Tlul keep town-houses in Beersheba for their members visiting that metropolis.

(3) It is only on the coast that the tents of these cultivator-herdsmen give place to the settled villages of the fellahin, Rafa, Khan Yunus, and Deir el Belah, and these belong both administratively and geographically to the sub-district of Gaza and not to the Negev. The "capital " of the Negev is Beer-sheba, which had ceased to exist for more than a thousand years when the Turks, anxious to strengthen their authority in the Negev, refounded it in the last years of the nineteenth century. Its population was drawn from Hebron and Gaza and has nothing in common with the " Bedouin " who come into town to buy and sell and run up debts with the money-lenders.

Before discussing the historical significance of the Negev, it is necessary to say something of the sources of our knowledge of the region. The history of its surface exploration is very briefly summarized in my " Archaeological Exploration in the Southern Desert " (*Palestine Exploration Quarterly*, 1938), and it will be seen that our topographical knowledge of the eastern zone is still imperfect. Mr. H. Dunscombe Colt has directed

excavations on four town sites from 1933 to 1938, when his work was interrupted by the disorders of that year. No detailed report on these excavations has yet appeared, but the following is a summary of the work done and the periods covered :

Sbaita : Extensive excavation of churches and houses, some investigation of the town middens. Chiefly sixth and seventh centuries A.D.

Auja Hafir : Excavation of two churches with large find of papyri. One church is built on foundations of an earlier fort. Associated middens. Second century B.C. to seventh century A.D. ; papyri of sixth and seventh centuries A.D.

Khalasa : Trial excavations in the vast town middens, chiefly of third and fourth centuries A.D. One midden overlies Hellenistic graves. Extensive Christian cemeteries of sixth and seventh centuries A.D.

Abda : Partial clearance of a Nabataean tower with later alterations. Surface exploration by earlier travellers has shown that the town continued into the sixth and seventh centuries A.D.

The American School of Oriental Research has excavated the Iron Age site of Tell el Kheleifeh the ancient Ezion Geber, near Aqaba.

Pre-Hellenistic Periods :—No systematic work has been done on the prehistory of the region, but palaeolithic artefacts have been reported from Qusaima and Khalasa. A group of long flaked knives from M'alaqa, north of Khalasa, is now in the Palestine Museum. Large numbers of barbed-and-tanged arrowheads have been found on surface sites, as far south as Ruhaiba and Abda. The Bronze Age civilization of South Palestine with its many tells does not seem to have penetrated into the Negev south of a line Tell Fara–Tell el Milh. There are a few guardshouses of the Iron Age, which probably indicate the attempts of the more enterprising kings of Judaea to protect the long line of communication with their port of Ezion Geber " which is beside Eloth (Aqaba) on the shore of the Red Sea in the land of Edom," where King Solomon made a navy of ships and organized the smelting of the local deposits of copper ores. That is the sum of our knowledge till practically the end of the pre-Christian era, and we must sup-

pose that the land was thinly populated as it is to-day by nomads who have left almost no material remains, unless some of the numerous cairns and other rude stone monuments are to be put back so early.

Hellenistic, Nabataean, Early Roman:—Tombs containing beads of a vaguely Hellenistic type have been found at Khalasa, and Rhodian stamped amphora-handles of the second century B.C. occur at Auja Hafir, Abda, and Khalasa. On none of these sites are the handles stratigraphically distinct from the thin matt-painted ware so characteristic of the Nabataeans and of Petra their capital, nor is it yet certain when this ware was first made. It is not therefore possible to say with certainty that these sites were occupied before the extension of Nabataean influence over the Negev. It is, however, quite clear that when in the second century B.C. the Nabataean Arabs wrested the control of the Red Sea trade from the failing power of Ptolemaic Egypt, it was necessary for them to establish a line of posts across the Negev between Petra and Aila (Aqaba) their port on the Red Sea, and Gaza, their outlet on the Mediterranean. It is perhaps to this period that the fortress-tower at Abda and the foundations of a fort at Auja Hafir, both of massive construction, belong. Ancient authorities state that Abda, then called Eboda, was founded by the Nabataean king Obodas, and that he was buried there. Nabataean pottery occurs on many sites, but it is too soon to map its distribution. The political frontiers in this unsettled period were probably indefinite and shifting. The only known trace of the influence of the Jewish Hasmonaean kingdom on the Negev at this time is possibly an unpublished inscribed lamp from Khalasa now in the Palestine Museum.

Professor A. Alt has shown that when Herod's kingdom was succeeded by the Roman province of Palestine, the southern frontier ran approximately Khan Yunus—Beersheba—Tell el Milh—Dead Sea, and thus excluded the Negev. This remained in the sphere of influence of the Nabataeans, who were themselves rapidly becoming subject to Rome in the first century A.D.

The political situation was radically changed when, in A.D. 105, Trajan annexed the Nabataean kingdom as the Roman province of Arabia, and built a strategic road south

through Transjordan to Aqaba. It was obviously undesirable to leave the Negev as a no-man's-land, from which unruly Bedouin might invade Palestine from the south or the new province from the west. More than that, Petra and the Red Sea trade did not die because the Nabataeans had lost their independence, and it was therefore necessary to reinforce with Roman thoroughness the strong points along the routes from Aqaba and Petra to Gaza. Alt's reconstruction of the sequence of events is provisional, in that it is based on later documentary evidence and surface exploration, and its chronology is not yet supported by excavation. He suggests that a line of forts was built along the whole length of the Araba from Aqaba in the south to Ain Hosb in the north, to protect the province of Arabia from the west. This line was connected with the southern frontier of Palestine by two oblique lines of forts. The shorter connected Tell el Milh with Hosb by way of an intermediate fort at Thamara, which Alt identifies with the forty metre-square fort of Qasr el Jahainīya el Qibli. The surface-pottery on this site is chiefly pseudo-sigillata of the third and fourth century A.D., but the midden is large, and earlier pottery may exist in lower layers. The careful excavation of this midden would be very desirable, but the distance to the nearest water-supply would require the size of the expedition to be kept small. The longer line of forts lies through Wadi Rumān and Wadi es Sīq, in the heart of the mountain zone, from Abda to the Araba. Its discoverer, Fritz Frank, found on this route two forts, forty metres square, and a number of smaller guardhouses. Nabataean pottery is common on the surface at all these sites, and at one of them, Qasr el Mahalla, there is a midden that would repay excavation. This route debouches into the Araba almost opposite Wadi Musa which leads to Petra. The square Roman fort at Abda was perhaps built when this line of forts was established. To the north-west of Abda, Khalasa lies on the direct line to Gaza.

In the present state of our archaeological knowledge it is not possible to distinguish between the deposits of the Nabataean first century A.D. and those of the Roman second century A.D. They have not been found strategraphically distinct, and it is highly improbable that there was any sharp cultural change at the time of the Roman annexation. Sigillata

wares had certainly been imported before that date, and the manufacture of Nabataean pottery certainly went on afterwards. At Auja Hafir and Khalasa, architectural fragments show the influence of the Nabataean column-capital.

Late Roman:—Alt considers that the defensive system of the Negev was again radically changed at a date between the early third century and the early fourth century A.D., and that it was in this connection that a legion was moved from Jerusalem and stationed at Aqaba. It is tempting on general historical grounds to connect this with the reorganization of the Roman Empire by Diocletian and Constantine. It is suggested that the line of forts along the Araba was reinforced by the building of additional ones, and that the defences of the Negeb were likewise strengthened. Two large rectangular forts on the hilltops of Abda and Auja Hafir are tentatively ascribed to this period. That at Abda has a cross carved symmetrically on the lintel of one of its main doorways. If this is original, it would suggest a date not earlier than Constantine. The Auja fort is earlier than a church and associated buildings on the same site, which were already consecrated ground in A.D. 464. It is significant that the typical pottery of the extensive middens that surround Khalasa is pseudo-sigillata of the third and fourth century A.D., suggesting that the city reached its greatest extent at this time, and subsequently began to decline. Nowhere at Khalasa was the Colt Expedition able to find middens of the sixth and seventh century, although there are extensive cemeteries of that period. At Kurnub, where Nabataean pottery occurs, there are buildings which would seem to be of third and fourth century rather than of a later date. Pseudo-sigillata is common on the surface there and also at the small fort of El Mirqib, halfway between Kurnub and Qasr el Jahainīya.

It seems likely that it is from this period that the town-sites of the Negev took on their urban character. The garrisons quartered here were probably *limitanei*, not crack troops trained for offensive warfare so much as armed settlers planted here under military discipline, obliged to provide their own livelihood and, in defending it, act as a first line of defence for the province. The whole aspect of the Late Roman—Byzantine settlement of the Negev changes, when it is remembered that the Roman Empire from the fourth century onwards was a

totalitarian state. The organization of the natural resources of the Negev appears to have been planned by a central authority. The careful canalization of the scanty water-supply, the building of dams and reservoirs and anti-erosion works, the vineyards whose vines were trailed between piles of earth and stones, which now remain in lines over barren slopes—all this activity has no parallel in this region in the centuries before the Roman period, nor since the Arab conquest. It is surely no coincidence that it occurred in the one period when the country was subject to a strong central government. The inference is that the government compelled the settlers to win a living from this harsh land, and that its object in settling them there was primarily strategic rather than economic.

It is agreed that at the beginning of the fourth century only a small proportion of the population of Palestine was Christian, and that the Christianizing of the country dates from the cult of the holy places that began with Constantine and Helena. There is no evidence of the penetration of Christianity into the Negev at this early date. According to the tradition it was the monk Hilarion who, finding that his hermit existence in the country near Gaza was unduly disturbed by visits of the curious from that city, moved further into the desert and began to convert the pagan inhabitants of the Negev. He is said to have founded a church at Khalasa about A.D. 350. There are Christian gravestones of A.D. 387 and 389 from Ghor es Safi, the marshes south of the Dead Sea. The Christianizing of South Palestine appears, however, to have proceeded very slowly. The majority of the population of Gaza was still pagan in 401, when the Christian minority burned the temple of Marnas. In spite of the early foundation of the church at Khalasa, there are no Christian gravestones there as early as 426, the date of the latest pagan stones. The earliest Christian gravestone of Gaza is dated A.D. 450, and the earliest in the Negev A.D. 464. Dated evidence of paganism disappears from this time, and from A.D. 500 onwards the series of Christian gravestones is very numerous, and every town has its several churches of the fifth and sixth century.

It is only in this period that we have a clear idea of the appearance of the towns, and it is the well-preserved and partly excavated town of Sbaita that is the chief source of our

information. Three churches, a monastery, a large public reservoir, narrow streets, dense complexes of stone houses of one or two stories, each with its own cistern dug in the soft limestone, are the principal features. The use of wood was reduced to a minimum. The houses were roofed with stone slabs supported by arches, and even the household cupboards were stone-lined and had stone shelves. Defence does not seem to have been an important consideration at this period. The town wall of Sbaita consisted only of the continuous outer walls of houses, and the entrances into the town were not defended. At a later date, however, perhaps early in the seventh century, when the imperial power was weak, one of the churches was fortified by the strengthening of the walls of the original structure, and the wide entrances into the town from the country were reduced to narrow posterns.

The extensive series of inscriptions of the sixth and seventh centuries throws some light on the social structure of the towns of this period, and the numerous papyri from Auja Hafir should greatly amplify this information, when they are published. Inscriptions indicate the possibility that Gaza and Auja Hafir were visited in A.D. 541 by the great plague which raged in the eastern Mediterranean at that time.

The ruling class in the towns were people with typical Christian names, taken from the saints and patriarchs. The priests and their families were evidently prominent members of the community, and the office of priest seems to have been sometimes hereditary. The Beersheba tax-edicts refer to garrisons in the Negev. Though there is no obvious barrack building at Sbaita, one inscription indicates that there were military officers in that community. In view of the tendency of the Late Roman Empire to force individuals to remain in the same employment as their fathers, it is probable that the descendants of the original military settlers still had military obligations, and that some of them held military rank ; but it would seem that by the end of the sixth century they were nothing more than a territorial force. Over against this upper class, the mass of the population were people with traditional Arabic names. We must suppose that the urbanization of the Negev, besides drawing enterprising traders and craftsmen from Palestine, attracted a great number of the local nomads

to settle in the towns by the promise of an easier living, and that these people became Christian without giving up the Arabic personal names of their pagan ancestors. This view is supported by the fact that the shape of the poorer Christian gravestones is a round head on a rectangular shaft, exactly like the earlier pagan gravestones of the district. The language of their inscriptions betrays an unfamiliarity with elementary Greek that goes far beyond mere barbarous spelling. The sculpture of limestone door-capitals and the like is crude and conventional, a local style in marked contrast to the stereotyped " Byzantine " work in marble that was probably imported from Gaza and the north.

Moslem period :—The older idea that the Moslem conquest of Palestine brought its Christian civilization abruptly to an end is no longer held by anyone. In the Negev the series of Christian gravestones went on without interruption, and large-scale repairs to churches were still possible. At Sbaita a small mosque was built adjacent to one of the churches, but without encroaching on it. One of the Auja papyri is a letter from the Arab governor of the province granting the Christian inhabitants freedom from worship on payment of the appropriate tax. An Arab family was given hereditary rights over certain lands.

However, about A.D. 700 darkness comes down on the Negev towns, though there is no evidence that they came to a violent end. It seems that with the weakening of central authority the effort required to maintain the standards of urban life in this region became too great, and that the inhabitants either moved north into Palestine with all that they possessed, or relapsed into nomadism. For a time the buildings were lived in by squatters who built crude fireplaces and windbreaks on the floors, and at Sbaita stamped Arabic pottery associated with these suggests that this primitive occupation went on for some centuries. Earthquakes perhaps hastened the ruin of the towns, especially of Abda, whose acres of ground thickly strewn with building-stones remind one of a town that has been under heavy bombing. It may be noted here that Khalasa was robbed of all its walls above the present ground-level during the nineteenth century for the rebuilding of Gaza, and that Auja Hafir suffered the same fate, just before and during the war of 1914–18.

The question of climatic changes in this region in historic times was first raised by Professor Ellsworth Huntington in his *Palestine and its Transformations*, and met with strong denial from specialists on the history of Palestine, who perhaps thought that greater climatic changes were postulated than is actually the case. It must be admitted that Huntington has perhaps overstated his case, which, as his other books show, has become the first article of his creed. In particular he is on logically unsafe ground when, from his original assertion that climatic changes were responsible for great historical movements, he has gone on to extend his climatic cycle by inference from historical movements in early times. On the other hand, the claim of his critics that climate has remained constant for the thousands of years of the historic period has been signally refuted by prehistoric archaeology in N.W. Europe. The evidence is well summarized by Brooke, a professional meteorologist, in his *Climate and History*, who shows (a) that the climate of the Mediterranean is closely connected with that of the Atlantic countries, (b) that the climatic fluctuations in N.W. Europe must have been accompanied by shifts in the paths of the Atlantic depressions which must in turn have affected the rainfall of the Mediterranean, and (c) that the variation in rainfall there can be deduced from ancient records. It is possible that the " sub-Atlantic " conditions of N.W. Europe, a few centuries before and after the beginning of the Christian era, produced a higher rainfall in the Mediterranean, and that the decay of the Negev was hastened by the gradual ending of those conditions. It is not suggested that the rainfall was considerably greater than it is to-day : a slight increase in the average winter's rainfall and a greater proportion of good years to bad years would have its greatest effect in marginal lands like the Negev, and make a settled habit of life possible where now it appears to be impossible.

Alt suggests that the Negev again came under military occupation in the Crusader period, especially in connection with Reynaud de Chatillon's attempts to turn the Moslems' left flank by an advance into Southern Transjordan. There is, however, no tangible evidence of this, for the forts in Wadi Ruman, to which Alt wished to assign a Crusader date, have only Nabataean and Roman pottery associated with them.

So for twelve centuries the Negev has been a wilderness without effective government, and Edward Palmer, *The Desert of the Exodus* (1872), and Musil both show how the Bedouin were feared by European travellers. The Turks at last made some attempt to bring the region under control by the rebuilding of Beersheba shortly before 1900 and their plans for establishing a seat of government at Auja Hafir, which were never completed. With the coming of the British mandate the district was policed, and new motor roads have been built. It was wisely realized that conditions in the Negev were very different from those of the rest of Palestine, and the traditional tribal courts were given legal powers. Those who have worked in the Negev in the last ten years have found its inhabitants simple and friendly. So remote were their interests from those of the rest of Palestine, that they were not involved in the disorders of 1929 and 1936, and the Governor could justly boast that his sub-district was the most orderly part of Palestine. It was only in the summer of 1938, when the police were hastily withdrawn from the Negev for emergency service in more populous areas, that the Negev became the seat of disorder. It is not clear how far the responsibility attaches to the local inhabitants and how far to bad characters coming down from the Hebron district.

When the land-laws placed restrictions on the buying of land by Jews in the rest of Palestine, they began to consider the possibilities of the Negev. Their propagandists make two sweeping statements, first, that the whole area of the Negev is habitable, and second that travellers report it to be virtually empty. On these " facts " they build a promising case for large-scale Jewish settlement. It is evident that they have never seen the eastern mountains for themselves ; in fact, very few outsiders have penetrated that region, and a Moslem from Gaza who accompanied me there, and had expected the whole country to be like the rolling plains south-east of Gaza, was appalled by these miles of rocky emptiness. I have made it clear in the first part of this paper that as these mountains pass into the plain country, so do the tribesmen become more numerous, and it would be rash to say that the north-west of the Negev is underpopulated in the present circumstances. The uncertainty of the rainfall is the factor that has restricted

the population to the present figure and compelled it to remain nomadic, otherwise we can be sure that the fellahin of the Gaza district would have pushed down in this direction. Undoubtedly the Jews, with finance and science behind them, and the superior physical energy of those reared in temperate Europe, could make more of this part of the Negev than the present inhabitants, unhelped and unorganized, who in some wadis build dam-walls to prevent erosion in imitation of the Roman dam-walls, but lack the means to cement them, and have had no one to teach them the advantages of contour-ploughing. However, since the prospects for irrigation by deep-level water are not good, even Jewish enterprise would be faced by the problem of water. Those who point to the achievements of the late Roman settlers forget to mention that, even if the climate has not changed, in marginal lands like this, there is active deterioration, when the necessary work of conservation is neglected as it has been since the Roman period. For twelve centuries the winter torrents have been deepening their beds and carrying off tons of good soil to the plain or the sea without hindrance ; and the dry winds have been sweeping over the plains removing the fertile earth and carrying off the good soil in clouds of dust. The Negev is a miniature " dust-bowl," and intensive settlement without safeguards might accelerate the erosion. In the spring of 1938 I saw the soil being swept from the Jewish arable-lands east of Beersheba, just after the harvest. Place names like Wadi Rumān, Wadi Zayatīn, Umm Ajwa remind us of the pomegranates, olives, and grapes that once grew there ; there are none in the Negev to-day. Major Jarvis is always reminding us of the fertility of Wadi Qadirat, where he made a pleasant garden out of nothing. But this wadi has the only decent perennial spring in the whole thirsty land. Many other wadis have as good soil as this ; only this one has the regular flow of life-giving water. The Arab sows his grain, and by March it is making quite a brave show ; but unless the spring rains are regular, it is light in the ear, and in bad years so empty that he turns his camel into it to graze. The Jewish settler, if he comes, must accept hardship, and those who finance him must expect loss. The Arab, too, has a right to his tribal lands, and being a simple man with little experience of

money matters, he needs a benevolent government to protect him, both from those who might exploit him and from his irresponsible self. It would be a wrong if Jewish colonization disrupted the tribal organization of these pleasant people or brought them to extinction.

This paper was written in a time and place where it was impossible to refer to books or notes. Any errors of fact are due to this cause.

REVIEWS AND NOTICES

Lachish II (Tell ed Duweir) The Fosse Temple. By Olga Tufnell, Charles H. Inge and Lankester Harding. (Oxford University Press and Sir Humphrey Milford, 1940, price 25*s. net*).

Most readers of the Quarterly doubtless already know something of the excavations at Tell ed Duweir from the preliminary reports which have appeared every year from 1933 to 1938. The site is identified with the ancient city of Lachish and is described by that name in the present work, though the evidence of identity is not absolutely conclusive. This volume, following on that in which Professor Torczyner published the ostraca known as the Lachish Letters, is the first that deals with purely archaeological material. It is limited in scope, being devoted to a small area apart from the main theatre of excavation, the site of a temple which was founded and twice reconstructed in the course of the Late Bronze Age.

The authors will have the heartfelt sympathy of all their readers in the losses which their expedition has suffered by the death of two generous supporters, Sir Henry Wellcome and Sir Robert Mond, and of Mr. J. L. Starkey, who directed the excavations with outstanding skill from their inception until the very day of his tragic death in January, 1938. A tribute of gratitude is due to Sir Charles Marston for the large part he has undertaken in supporting the expedition.

The present volume maintains the high standard of work established by Mr. Starkey; it is pleasantly written and illustrated with excellent photographs and plans. The arrangement of the pottery plates, showing the types from the successive structures in parallel columns, is very successful, while the photographic reproductions which accompany the line drawings are an instance of the attention to detail which marks the whole work and which is further displayed in the analyses of glass and glaze, metals and pottery fabrics and in the various contributions obtained from experts in particular fields. Minor blemishes are the absence of a scale from the pottery plates and the omission from a map which purports to show the Bronze Age sites in Palestine of the numerous small

Tells where soundings have brought to light evidence of occupation in that period, such as those explored by Professor Garstang in the plains of Acre and Esdraelon.

Before embarking on detailed descriptions of the course of the excavations and of the buildings themselves, the authors summarise their results and conclusions in Chapter I, concerning themselves mainly with the question of the dates of the original Temple (Structure I) and of the two rebuildings (Structures II and III).

The ruins of the Temple, discovered unexpectedly during the clearance of a space for the deposit of débris at the foot of the Tell, stood on soil which had accumulated, after the destruction of the Middle Bronze Age (" Hyksos ") defences of Lachish, in a wide rock-cut fosse below a glacis—an oddly chosen site, exposed to flooding after heavy rain and also to the fall of heavy boulders from the slope above. Structure I consisted of a " Sanctuary " and two smaller rooms ; this Sanctuary was an oblong chamber ten metres in length from north to south by five metres in width, with two roof-supports centred on the long axis and an entrance on the west side screened by a short projecting wall. At the southern end was the " Shrine "—a low bench three metres long with three rectangular blocks (perhaps altars) standing out from it.

In Structure II there was a change in the shape of the Sanctuary, which was increased in width to 10.40 metres and so became almost square, with four roof-supports. The period of Structure III dates from the raising of the Sanctuary floor-level by sixty-five centimetres, but this involved no major alteration in the ground plan—indeed it cannot be proved that such changes as were observed in the Structure need all have been made at the same time.

It is noteworthy, as a proof of the essential continuity of the Temple, that each succeeding Shrine was erected on the site of the one below. That of Structure II differed from the earlier one in being of stone instead of clay and in having only one altar-like projection ; in Structure III the Shrine at first consisted of a large white-plastered platform, rising slightly towards the back, but later on the platform was raised in height and an altar was built out from it. Two rooms, at north and south respectively, adjoined the Sanctuary of Structure II and

a third was added at the south of Structure III ; all the walls of the Temple buildings were of rough unsquared stones. A number of rubbish-pits had been dug at various periods round the Temple ; some of these lay below floors of Structure II and the objects found in them are therefore datable to the period of Structure I at latest.

These square Sanctuaries, with their roof-supports standing on stone bases, have certain features in common with the Temples of Levels VI and VII at Beisan, such as benches for offerings round the walls and receptacles for objects connected with the cult, but there is nothing in the Lachish Shrines to recall the platforms with steps leading up to them and the detached altars of Beisan. Certain pottery objects, which must have had some ritual purpose, have been found at both sites, such as bowls with one side turned up, double bowls—like cup and saucer in one—and cylindrical stands with round or triangular apertures. These stands are found in all three Structures, but are never decorated, as at Beisan, with figures of doves in the apertures and snakes on the outsides, though among the pottery objects there is a fragment of a bird (Pl. XXVIII, Fig. 3) which was originally attached to a vessel. Among what are presumably votive offerings we naturally find beads, scarabs and cylinder seals conspicuous at Lachish as at Beisan.

Structure III was destroyed by fire and never rebuilt ; the site was obliterated by landslides and so soon forgotten, that in the Early Iron Age graves were dug in the débris above the ruins of the Temple. There are traces on the mound itself of a conflagration which is believed to have caused the destruction of the latest Bronze Age level, so it may be supposed that Structure III perished as the result of a hostile invasion.

There is an obvious contrast between the violent end of Structure III and the peaceable rebuilding of the two earlier structures, but it is surely misleading to write of these that " in neither case were there signs of deliberate destruction " (p. 19), as it seems most likely that each in turn was pulled down with the design of setting up another in its place—than which nothing could be more deliberate.

As a natural result of this sequence of events, a very much richer harvest of objects (other than fragments of pottery) was

gathered from the ruins of Structure III than from the earlier buildings. This applies to all the ivories and to most of the glass and glaze, stone vases and beads. But we are not to assume that they were all originally deposited in Structure III ; there is every likelihood that objects of value would be preserved when the temple which housed them was pulled down, as was almost certainly the case with a fine scarab of Amenhetep III, of the " lion hunt " type, found in Stratum III, but concerning which the question is whether it came from Structure I or from Structure II.

The dates to be assigned to the duration of these structures are discussed in Chapter I. Mr. Starkey placed the foundation of the Temple in the reign of Thothmes III, after the victory of Megiddo. The evidence now brought forward in favour of an earlier date is not very strong, even apart from the possible intrusion of Middle Bronze Age fragments into the rubbish pits below the floors of Structure II. One such pit contained a crater, of the so-called " bichrome " ware, which Dr. W. A. Heurtley, in his article on " A Palestinian Vase-painter of the Sixteenth Century B.C." (*Q.D.A.P.* VIII, p. 28 and Pl. XIVB), recognizes as the work of an artist whose *floruit* falls partly in the first and partly in the second half of the sixteenth century. It is, however, important to note that this dating is based on the mistaken impression that a globular jug by the same vase-painter was found in Stratum X at Megiddo (*ibid.* p. 21, n. 4, p. 26 and Pl. XIII g) whereas in Mr. G. M. Shipton's more recently published *Notes of the Megiddo Pottery of Strata VI–XX* (p. 13 sqq, Pl. 4, 5, chart IX, no. 4) the jug in question is shown as belonging to Stratum IX, which represents the period immediately preceding the invasion of Thothmes III. Another " bichrome " crater (No. 256 of the pottery series), found in the fosse, is regarded as a late example of its class, and there seems nothing surprising in the survival of these two pieces into a Late Bronze Age context. Two bowls (Nos. 169 and 170) which are mentioned in the same connection are of a very thin sort of Base-ring Ware, and this has now been found at Curium, in Cyprus, and is there dated to the fifteenth century (*v.* p. 79, footnote). Some of the juglets and carinated bowls of Structure I have affinities with the Middle Bronze Age, but these shapes are known to survive into the later period

and are found at Megiddo in Stratum VIII (Shipton, *op. cit.*, chart VIII, nos. 3, 37, 38).

That Structure I lasted until the reign of Amenhetep III is proved by a plaque bearing his name which was lying under the foundations of Structure II. The excavators are inclined to believe that the lion hunt scarab, of the year 1401 B.C. (found in Structure III), was presented to the Temple as a mark of favour by Amenhetep III and was in some way connected with the building of the more imposing Structure II, which would therefore date from about 1400 B.C. Needless to say, the authors, who are always careful to avoid unduly dogmatic statements, do not rely on this ingenious theory only but contend that the pottery of Structure I leads to the same conclusion, while admitting that there are some forms in Structure I which do not seem earlier than 1400 B.C. We would add that in the list of vessels with foreign connections from Structure I the " drop vase " of Egyptian type, to which is assigned the range 1560–1447 B.C., is paralleled at Beisan in Level VII (probably dating from the XIXth Dynasty) as well as at Megiddo in Stratum VIII (Shipton, *op. cit.*, chart VIII, No. 30, Pl. 3, 22). It may be mentioned in passing that Level III at Atchana, mentioned in the same list and dated 1475–1350, is now dated *c.* 1358–1285 by Mr. Sidney Smith (*Alalakh and Chronology*, pp. 44–47). We are tempted therefore to advocate a slightly lower date for the end of Structure I, say 1350 B.C. (which is given as the end of Stratum VIII at Megiddo, where there are many analogies to the pottery of Structure I), but it may be thought that a less disturbed period would be likelier for the erection of a new and larger temple and that if one rejects the reign of Amenhetep III one is driven to attribute Structure II to the XIXth Dynasty.

As matters stand, that is the period assigned to Structure III, which is considered, on the balance of evidence, to have lasted from about 1325 until Merneptah's raid on Palestine in 1223 B.C.; but it is hinted that a downward revision may eventually prove to be necessary, as a scarab of Rameses III in the burnt level of the mound suggests that the destruction of Lachish took place in his reign, if not later.

The small objects found in Stratum III do not provide much indication of date, since they cover, in general, the period

from 1400 to 1200 B.C. Moreover a large proportion of them may have been brought in from one or other of the earlier Structures, like the scarabs of Amenhetep III. This might apply equally to some of the painted pottery, but with regard to this there is a fact which should be noted, namely that while decoration in two colours[1]—normally red and black—occurs in the earlier buildings, monochrome red paint prevails in Structure III. The disproportion is very great; from the examples illustrated it appears that the two-colour schemes are actually more numerous than the monochrome in Structures I and II, whereas the pottery associated with Structure III includes only three examples of red and black decoration, a bowl on stand, No. 216, a lentoid flask, No. 351, and a fragment (Pl. LXI, 8) besides two examples of red combined with white paint. The same process may be observed at other sites: in Stratum VII at Megiddo (1350–1170 B.C.) there appears to be a very small proportion of two-colour decoration as compared with Stratum VIII (1479–1350 B.C., *v.* Shipton, *op. cit.*, Pls. 1–3); at Beisan the overwhelming preponderance of monochrome is observable at Level VI, in the ruins of buildings that can be dated with some confidence to the period of Rameses III,[2] while in Level VII, immediately below, there is a fair proportion of decoration in two colours—about one in four of the published examples. The painted pottery of Jericho, illustrated in *L.A.A.* XXI (Pls. XXVII–XXXIX) dates from the XVIIIth dynasty and shows a proportion of about six in two colours to seven of monochrome. These comparisons, for what they are worth, tend to confirm the ascription of Structure II to the XVIIIth dynasty, while suggesting a late date in the Bronze Age for the end of Structure III.

[1] This must not be confused with the so-called bichrome decoration mentioned above in connection with the dating of Structure I.

[2] It is with some embarrassment that the present reviewer finds himself obliged to record his abandonment of the opinion (to which Mr. Alan Rowe adheres in his recent volume, *The Four Canaanite Temples of Beth-shan*) that Level V at Beisan is to be considered the "Rameses III Level." Despite some evidence to the contrary, he can no longer resist the conviction that the limestone lintel bearing the name of Rameses III (with other inscribed lintels and door-jambs) must come from a building in Level VI (called the Early Seti I Level). The authors of *Lachish II* (at p. 85) adjust the Beisan chronology in accordance with this view.

The most remarkable of the painted vases, the " Duweir Ewer " reproduced in colour as a frontispiece to this volume, is not earlier than the reign of Rameses II and probably stood in the Sanctuary of Structure III. It bears an inscription in an early Semitic script which has already attracted a good deal of discussion. Together with another inscribed fragment, the " Lachish Bowl No. 2," it is discussed in Chapter IV by Mr. T. H. Gaster, who sets out in tabular form the readings proposed by various scholars. These show a large measure of agreement about the characters on the ewer, but very little about those on the bowl, which have much less resemblance to any known style of writing.

In the absence of votive stelae or the like, there can be no certainty about the names of the deities worshipped at Lachish, nor is there a great deal to be learnt about the ritual. There is thought to be some evidence for offerings of flesh, cakes, libations and incense, for the use of lamps and ceremonial ablutions and for the custom of deliberately breaking vessels after their use in the Temple. It was observed (*v.* Appendix B) that practically all the identifiable bones of animals were metacarpals of the right foreleg—the portion reserved to the priests under the Mosaic Law. Appendix C contains a list of such Biblical texts as have a bearing on the ritual of the Lachish Temple. No object of worship, statue or betyl, was found in any of the Sanctuaries, but a hand and an eye, both of ivory and both two-thirds of life size, give rise to a tentative suggestion that a composite statue of wood and ivory may have stood upon the Shrine.

Syrian workmanship is recognizable in a number of carvings in ivory found near the Shrine of Structure III. One of these is a cylindrical box with lions and bulls in relief, the former recalling the attitude of lions on the gold bowl from Ras Shamra and the basalt slab from Beisan, both of which may be dated to about the fourteenth century.[1] Mr. N. de G. Davies contributes a note on a perfume flask terminating in a female figure, like the ones carried by Syrians in Egyptian tomb-paintings. Two glazed vases of Egyptian types were found with these ivories.

[1] This school of ivory carving should perhaps be styled Phoenician ; Mr. R. D. Barnett has distinguished the influences observable in Palestine in *P.E.Q.*, 1939, p. 4 sqq.

The cylinder-seals are discussed by Miss Barbara Parker, who distinguishes three types, all of foreign origin but common in Palestine, where no local style is known. They are almost all classified as Mitannian—indeed there appear to be only three definite exceptions, Nos. 47 and 53 of a " pseudo-Egyptian " type, influenced by the technique of scarab-cutting, and No. 52 of Syrian style. Miss Parker makes the point that Mitannian seals are found mainly in thirteenth and fourteenth century levels in Palestine ; it is doubtless true that many were kept by their owners long after they were made, but even so they support the view that the proposed date for the Nuzu tablets (1500–1400 B.C.) is too early and that Mr. Sidney Smith's dating (1450–1350) is to be preferred.

A collection of beads and pendants from Structure III, resembling finds at Tell el Amarna, is deemed worthy of a coloured plate. This may seem somewhat extravagant, but the authors themselves anticipate criticism of this volume as being more elaborate than the discoveries warrant, so we may hope that the publication of the levels on the mound of Lachish will not be attempted on too lavish a scale to be carried through. We look forward with much interest to the successful completion of the task of publishing the splendid results already obtained, as also to the resumption of work on the site, as soon as peace returns.

G. M. FitzGerald.

1. *Explorations in Eastern Palestine*, III. By Nelson Glueck, 1939.
2. *The Other Side of the Jordan.* By Nelson Glueck, 1940. Both published by the American Schools of Oriental Research, New Haven, Connecticut.

Some sixty odd years ago the Turkish Government began to take a livelier interest in the lands east of the Jordan : Muslim refugees from the Caucasus, Circassians and others, were settled there and railways were planned. For centuries before this the centres of permanent occupation were few and insignificant : Beduin tribes wandered at will over the rest of the country. The new policy changed this. There were many old sites with fertile land round them and running water or old tanks which could be reconditioned and ancient buildings

with masses of cut stone which invited resettlement. And the increased security which has been established during the last two decades has intensified this movement : one old site after another has been reoccupied, new discoveries are constantly made and old landmarks constantly obliterated. These facts add value to the rapid surveys which Professor Glueck has been conducting recently on behalf of the American Schools of Oriental Research.

Most of the earlier archaeologists who have visited Transjordan have been pre-occupied with the larger buildings and inscriptions which have survived here in such numbers. Professor Glueck, like his master Professor Albright, is a ceramist and it is the broken potsherds littering the surface which have engaged most of his attention. As a rule these sherds are too fragmentary to tell us much about the shapes or decorations of the vessels from which they came but the expert can date many of them within certain rough limits. The number of sites from which they have been collected runs to hundreds. The sherds consequently give an indication of the character and intensity of civilization at different periods and offer a fresh line of approach to some old problems, the dating of the dolmens and other rough buildings, for example, or the probability of various deductions which have been drawn from literary sources. In other volumes and articles Professor Glueck has published notes of his travels in Edom and Moab, the two southernmost districts across the Jordan : in the first of the two books before us he gives further travel notes about these regions and similar notes about South Gilead ; the second book consists of six popular lectures on Transjordan, including brief reports of two excavations, one near Aqaba at the supposed site of Ezion-Geber, the other on the site of a Nabataean temple at Jebel Tannur close to the Wadi Hesa. There are good photographs in each volume, some of the best having been contributed by the Royal Air Force, whose assistance in other ways is gratefully acknowledged.

According to Professor Glueck the earliest series of sherds are like those assigned to the last or fourth phase of the Early Bronze Age in Western Palestine and the beginning of the Middle Bronze. The numerous sites on which they are found are distinctive--high, isolated, flat-topped hills, close to

strong springs. Massive walls were built round them but as none have been excavated it is not possible to say more about them. The period runs from before 2200 B.C. to about 1900, and the dolmens of Gilead may date from this time. After this there is a break in the ceramic record which lasts till about 1300 B.C., that is, until the beginning of the Early Iron Age in these parts : the country was perhaps occupied by Bedu who have left no traces behind them. In Professor Glueck's view the presence of the long line of early settlements which he has found " authenticates the general validity of the background of Genesis xiv " (the chapter which describes the fight of Abraham against the four kings). He is on surer ground perhaps when he connects the long gap in the record with the Hyksos invasion of Egypt and points to the absence of any Egyptian references to Edom or Seir before the reign of Merneptah (*The other side*, p. 149). A briefer " time of troubles " occurred about the same period in the Nuzi area (*P.E.Q.*, 1940, p. 100).

The resettlement of the country in the thirteenth century may be related with the rise of the kingdoms of Edom, Moab, Ammon and the Amorites. Esau was the elder son of Jacob and Professor Glueck thinks that the civilization of Edom was older and finer in many ways than that of Israel : the settlements are larger and more numerous than in the Early Bronze Age, and show more affinities to north and south than to the west, though in what respect we are not told. To the period 1200–600 B.C. Professor Glueck ascribes the construction of many rough stone buildings, among them the circular towers near Amman about which Duncan Mackenzie wrote in an early publication of the *P.E.F.*, but the only one with which I am acquainted, the Qasr at Baluah, was *reconstructed* at least much later and though Professor Glueck is probably right in the main, more evidence will be needed before we can feel certain about any particular building. In his second volume Professor Glueck describes the excavations which he made on a site he identifies with Solomon's foundation at Ezion-Geber, but the evidence at present published does not remove all our doubts about the dating : the construction of mud-brick walls in alternate courses of headers and stretchers has not been recognized previously as Solomonic, and do we know enough

about the ceramics to say that the sherds which date from the constructional period can be attributed only to the middle decades of the tenth century? Another of Professor Glueck's arguments also fails to carry conviction: he points out rightly that the settled conditions, the strong cities and so forth, which he has discovered in Edom, Moab and Ammon, are those posited by the account of the Exodus in the Bible and argues that the Exodus cannot have taken place before the thirteenth century because these conditions did not exist at an earlier date, but may it not be argued with equal plausibility that the earliest Biblical writers, who are generally assigned to the ninth and eighth centuries, were simply describing the contemporary background with which they themselves were familiar? [1] It will still be possible for those who demand an earlier date to maintain their position.

A few Greek sherds prove that the country did not relapse into pure nomadism in the next few centuries, but the most spectacular later remains in Transjordan are those of the Nabataean kingdom which reached its zenith perhaps in the first century of our era. Professor Glueck has identified some five hundred Nabataean sites: many of them are small outposts to protect the roads or frontiers but the number includes a series of temples and gives abundant evidence that the people were vigorous agriculturalists as well as caravaners. The sites are easy to recognize because Nabataean pottery is quite unmistakable: the most characteristic vessels are small open bowls of surprisingly fine ware sketchily decorated with various leaf- and flower-forms. Fragments of these are very common in the south of Transjordan and also on the trade routes across the Negeb, but they are only found sporadically to the north in the country controlled by the cities of the Decapolis. This barrier is the more striking because the Nabataean rule extended much farther north across the Hauran as far as Damascus, and Professor Glueck makes the interesting suggestion that communications between the two centres may have passed largely through the Wadi Sirhan. Besides the fine painted bowls the Nabataeans made a great

[1] Compare the Egyptian names in the Joseph story which "cannot be genuinely ancient names, and did not in fact originate before the tenth or ninth century B.C." (Driver, on *Genesis* xli. 45).

deal of imitation sigillata ware in a reddish clay : they also imported a quantity of the buff sigillata ware which is characteristic of most of Syria and of many Greek sites, so characteristic indeed that we hope archaeologists will soon discard the term Pergamenian which Dr. Waage has introduced to describe it. The Nabataean temple which Professor Glueck has begun to excavate in conjunction with the Transjordan Department of Antiquities stands high up on Jebel Tannur. The temple or parts of it appear to have been rebuilt at least twice and when the excavation has been completed it should throw much new light on Nabataean history ; in plan it has obvious resemblances to the temple at Si'a and the reliefs are like carvings from other places in the Hauran ; one dedication with the date 7 B.C. has already been found.

Professor Glueck has filled in many of the blank spaces on the map of Transjordan. We are now ready for the next stage, an intensive study by means of excavation of a number of the more notable sites to which he has blazed the path.

J. W. CROWFOOT.

The Committee have to acknowledge with thanks the following :

Antiquaries Journal, October, 1940, January 1941.
Expository Times, February, 1941.
Annals of Archaeology, University of Liverpool, vol. XXVII.
Journal of the Royal Society of Antiquaries of Ireland, December 1940.
Bible Lands, January, 1941.
Religions, January, 1941.
Bulletin of the American Schools of Oriental Research. December, 1940.
Jewish Quarterly Review, January, 1941.
Annual Report of the Smithsonian Institution, 1939.

TRANSLITERATION OF HEBREW AND ARABIC CONSONANTS

HEBREW

Hebrew	English		Hebrew	English	
א	ʾ		כ ך	kh	
ב	b		ל	l	
ב	bh		מ ם	m	
ג	g		נ ן	n	
ג	gh		ס	s	
ד	d		ע	ʿ	
ד	dh		פ ף	p	
ה	h		פ ף	f	
ו	v, w		צ ץ	ẓ	
ז	z		ק	ḳ	
ח	ḥ		ר	r	
ט	ṭ		ש	sh	
י	y		שׂ	s	
כ	k		ת	t	
			ת	th	

ARABIC

Arabic	English		Arabic	English	
ا	ʾ		ض	ḍ	
ب	b		ط	ṭ	
ت	t		ظ	ẓ	
ث	th		ع	ʿ	
ج	g	or j in Syrian Arabic.	غ	gh	
ح	ḥ		ف	f	
خ	kh		ق	ḳ	
د	d		ك	k	
ذ	dh		ل	l	
ر	r		م	m	
ز	z		ن	n	
س	s		ه	h	
ش	sh		و	w	
ص	ṣ		ي	y	

Long vowels marked thus :—ā, ē, ī, ō, ū

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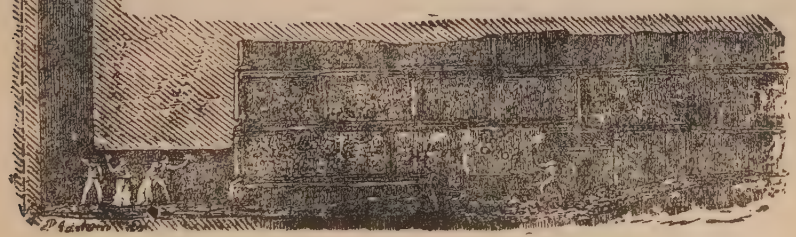

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CONTENTS

PAGE

NOTES AND NEWS 85

ON ANCIENT HEBREW INSCRIPTIONS DISCOVERED AT TELL ED-DUWEIR (LACHISH) II :
BY DAVID DIRINGER 89

THE DATE OF THE EXODUS :
BY A. LUCAS 110

THE RAINFALL OF PALESTINE :
BY C. F. ARDEN-CLOSE 122

CORRESPONDENCE 129

REVIEWS AND NOTICES OF PUBLICATIONS 130

LIST OF ILLUSTRATIONS

PAGE

ON ANCIENT HEBREW INSCRIPTIONS DISCOVERED AT TELL ED-DUWEIR (LACHISH)—II :

PLATE VI : ROYAL STAMPS (I) .. .. *after* 108

PLATE VII : ROYAL STAMPS (II) .. .. „ „

PLATE VIII : SEALS .. .. „ „

PLATE IX : THE ROYAL BAT .. .. .. „ „

PLATE X .. „ „ Details of Reconstruction „ „

PLATE XI : FIG. 1. A PRIVATE STAMP .. „ „

„ 2. REMAINS OF AN INSCRIPTION .. .. „ „

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS

THE SEVENTY-SIXTH ANNUAL GENERAL MEETING OF THE PALESTINE EXPLORATION FUND was held at 2, Hinde Street on Wednesday, 25th June, 1941, when, owing to the unavoidable absence of Sir Charles Arden-Close, the chair was taken by Mr. J. W. Crowfoot. Formal business only was transacted.

The Minutes of the last Annual General Meeting were read and confirmed.

The Chairman moved the adoption of the Annual Report and Accounts for 1940 which had been issued to members. Mr. Mortlock seconded the motion which was carried unanimously.

The re-election of the Executive Committee, with the addition of two new members—the Right Revd. Paul Fulerand Delacour de Labillière, D.D. (Dean of Westminster) and Miss Olga Tufnell was proposed by Mr. W. H. Boulton and was carried unanimously.

Messrs. Turquand, Youngs, McAuliffe & Co. were reappointed Auditors for 1941.

APOLOGIES are due to our subscribers and contributors for the irregular appearance of the QUARTERLY. This is due partly to difficulties in the printing of Dr. Diringer's learned epigraphical article caused by depletion of the printing staff through war needs, and partly by delay in the production of the Annual Report of the Palestine Exploration Fund. It is hoped to bring the QUARTERLY gradually back to its normal intervals of publication. Meanwhile the editor asks for the forbearance of readers, and offers sincere thanks to those contributors who continue to make it possible for the QUARTERLY to remain in being.

The long and brilliant life of Sir Arthur Evans covers a

century of magnificent achievements in the field of archaeology, from the resurrection of Troy to the restoration of Ur. We have seen the Egypt of the Pharaohs live again, the civilizations of Sumer and the Indus valley, the records of the empire of the Hittites. We have witnessed the decipherment of nearly all the ancient scripts, and it is sad that Sir Arthur Evans should not have lived to see the riddle of the Cretan script solved. Among all these great achievements none was more spectacular or more scientifically executed than the excavation of ancient Knossos and the resultant revelation of the glories of the brilliant island empire of Minos. Sir Arthur Evans was fortunate in having at his disposal great resources, both of wealth and mental gifts, and he spent both lavishly in the service of archaeology. He has left behind him as enduring monuments the splendid volumes containing the records of the excavation of Knossos, and the Ashmolean Museum at Oxford.

The June issue of *Antiquity* contains a valuable article by Professor Speiser on the beginnings of civilization in Mesopotamia. Professor Speiser is one of that distinguished group of American orientalists who have made such important contributions to Oriental philology and archaeology, and he is already known to English students by his *Mesopotamian Origins* and his stimulating monograph on *Ethnic Movements in the Near East in the 2nd Millennium B.C.* The article referred to above contains some pertinent criticism of the current divisions of pre-dynastic culture in Mesopotamia, and some very interesting suggestions with regard to the working of diffusion in this area. Professor Speiser puts forward the view that the idea of writing was borrowed by Egypt from Mesopotamia, and gives cogent reasons in support of this suggestion. The idea, however, is not likely to meet with acceptance in every quarter, and it will be interesting to see what replies are elicited from other scholars. In passing may we offer our congratulations to the Editor of *Antiquity* on the continued maintenance of the very high standard of interest and illustration which we have come to associate with *Antiquity*.

In the June issue of the *Expository Times* Dr. Jack has an interesting note on evidence furnished by the Ras Shamra

Tablets for the existence of trade and craftsmen's guilds at a very early date in Syria and Palestine. In this connection Dr. Diringer, in the second part of his article on the inscribed stamps and seals from Lachish, published in this issue of the QUARTERLY, points out the probability, based on the recurrence of certain proper names on the stamps which he has examined, that such crafts were a kind of family inheritance, handed down through generations from father to son. Dr. Jack gives references to show that ten different classes of trades and crafts mentioned in the Ras Shamra Tablets have their counterparts in the Old Testament.

In the *Bulletin of the Jewish Palestine Exploration* for December, 1940, Dr. Avi-Yonah has an interesting article on a small bone tablet found at Beth-Shan and recently purchased by the Palestine Archaeological Museum. It represents a seven-branched candlestick and four other Jewish symbols, namely, a *shofar*, an *ethrog*, a *lulab*, and a fourth object which Professor Yeivin, in a footnote identifies with the *makhtah*, or fire-shovel, used by the high-priests for burning incense on the Day of Atonement. Dr. Yeivin suggests that it continued in use after the destruction of the Temple, as the description of its use in the Mishna tractate *Yoma*, V. I, seems to indicate.

In the same issue of the *BJPES* Dr. Yeivin has a note on the origin of an ancient Jewish Burial custom, namely, that of placing a key in the coffin of a deceased person. He suggests that this " Parthian " custom was borrowed by Babylonian Jews and used in cases where the deceased had no male issue, and was obliged to ensure his admission to eternal life by other means. Babylonian Jews, who brought their dead to be buried in Palestine, introduced this custom into Palestine about the end of the first or the beginning of the second century A.D.

In the *BASOR* for February, 1941, Professor W.R.Taylor of Toronto discusses a new Samaritan inscription, not hitherto published, photographs of which were placed at his disposal by the Director of the Department of Antiquities in Jerusalem. The inscription, as Professor Taylor points out, is intended to present a compendium of the Decalogue, but its variations

from the Shechem Decalogue indicate that there were differences of opinion among the Samaritans both as to the divisison of the Decalogue and as to the elements in it to be emphasized. Professor Taylor has some very valuable comments on the epigraphy of the inscription which throw fresh light on the problem of dating Samaritan inscriptions and will be of great service to students of Semitic epigraphy.

In the same issue of the *BASOR* Professor Albright returns to the subject of the *Aechtungstexte* in the light of fresh material of the same kind which the French Egyptologist, M. Posener, has recently published (1940) in Brussels. As M. Posener's book is not at present accessible to British or American scholars, Professor Albright's brief discussion, based on the *Comptes Rendus* of the Paris *Académie des Inscriptions et Belles Lettres*, has a special value. As compared with the earlier texts the new material shows a remarkable increase in the number of fortified places, testifying to the great development of urban life in Syria and Palestine from the beginning of the nineteenth century and onwards. Among the fresh names are Magdal, Shechem, Apiqum (probably Aphek), Hazor, and Beth-shemesh. A further point of interest is that in the Brussels lists a number of districts named have two princes, one of whom is assigned to the northern part of the district while the other is allocated to the southern part. Professor Albright draws a comparison with the designation " Children of the North " and " Children of the South " occurring in the Mari Tablets, somewhat later than the material under discussion. He sums up the importance of the new data in the following words : " To the biblical scholar the new data will be particularly welcome, since they make it possible to describe the political and ethnic situation in Palestine in the early patriarchal age much more fully and accurately than has hitherto been possible."

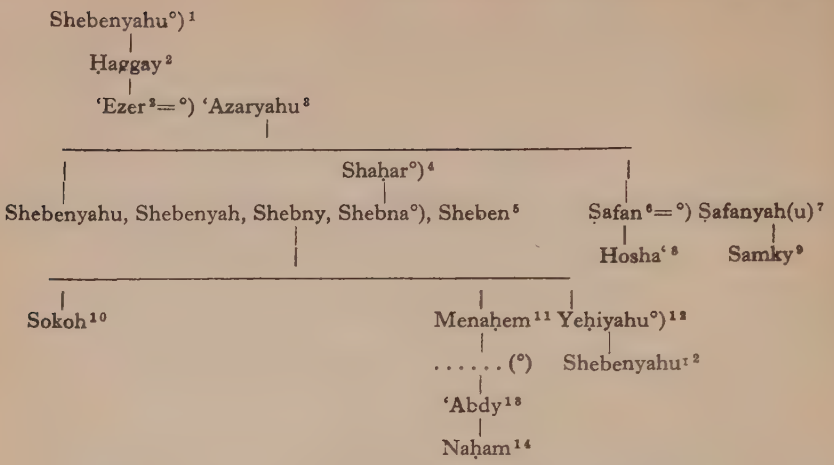
ON ANCIENT HEBREW INSCRIPTIONS DISCOVERED AT TELL ED-DUWEIR (LACHISH)—II

By David Diringer

Before dealing with the royal stamps, I consider it useful to note a very interesting problem which occurred to me during my researches on private stamps.

Some names and patronymics recur with a certain frequency, for which it would be difficult to exclude a connection. In short, I think that we can reconstruct a species of " dynasty " of potters. Some relationships seem to me certain, others are more or less doubtful, but it would be useful to mention these also. The uncertainty depends not only on the fact that in many cases the reading is doubtful, but also because the names which recur are not always presented in the same form : sometimes they appear in full, sometimes they are more or less abbreviated. However, we can admit with certainty that the forms שבניהו = שבניה = שבניו = שבני or עזריהו = עזריה, etc. indicate the same person, but we cannot admit it so definitely for the form עזר = עזריהו (granted that on general lines it is probable that עזר is nothing more than an abbreviation of a theophoric name like עזריהו = עזריה) or else—and the probability is even less—נחם = מנחם. I do not allude here to the identity of the person : that may be excluded on chronological grounds, but I only speak of the identity of the name. If it is a question of the same name, it is quite possible, if not very probable, that the same family is concerned.

Considering the established and the uncertain relations (these are marked thus °) we arrive—with all reserve—at the following genealogical tree :



Addendum to the "Private Stamps" (Part I of this article). (Plate XI Fig. No. 1)

Add to No. 9 :

Another mark, found by the Wellcome-Marston Expedition at Lachish, is now to be seen at the Palestine Museum (Reference No. 38.717).

J. 16, Room 1028, No. 6236.

This mark has been impressed by the same mould and is equally doubtful as regards reading and meaning.

It may be useful to publish the photograph of this mark, as the other one is published only in a drawing.

[1] See *Iscrizioni*, seal No. 20.

[2] See *Iscrizioni*, (seal No. 20 and) stamp No. 2.

[3] See *Iscrizioni*, stamp No. 5 and the first part of this article, stamps No. 1 (and 12).

[4] See the first part of this article, stamp No. 8 (?).

[5] See *Iscrizioni*, stamps No. 5 *a*, *b*, *c*, 6 ; this article (I Part), stamps No. 8°), 9, 11, 12.

[6] See *Iscrizioni*, stamps No. 3°), 4 ; this article (I Part), stamps No. 1 and 2.

[7] See this article (I Part), stamps No. 21 and 22.

[8] See *Iscrizioni*, stamp No. 4 ; this article (I Part), stamp No. 2.

[9] See this article (I Part), stamp No. 21.

[10] See this article (I Part), stamp No. 9 (and perhaps also No. 11).

[11] See *Iscrizioni*, stamp No. 6.

[12] See this article (I Part), stamp No. 12 (?).

[13] See *Iscrizioni*, stamp No. 7 ; this article (I Part), stamps No. 6, 7.

[14] See *Iscrizioni*, stamp No. 7 ; this article, stamp No. 6.

(*c*) *Royal Stamps.*

(Plates VI–VII).

For the first time, I have before me a considerable number of royal stamps of various types, found in a single locality, and I am thus in a fortunate position to formulate some hypotheses of a more general character, which I shall do in the detailed study of these little inscriptions, already mentioned at the beginning of these notes. At any rate, I think it is opportune to anticipate some of the conclusions which I reached after having minutely examined the material at the Institute of Archaeology, and taking into consideration the material previously examined by me.

From the graphic point of view, in two out of the four groups of royal stamps, in those of Ḥebron and Zyf, I have been able to distinguish three sub-divisions, while in the other two groups I have only found the second and the third sub-divisions. Naturally I cannot state that these sub-divisions denote chronological differences: Mr. Lankester Harding examining with me the data of discovery of some of these handles, informed me that handles belonging to my sub-divisions have been found in the same archaeological stratum. In my opinion, it is not essential that they should have been manufactured in the same period. However, even if these sub-divisions do not indicate different periods, the fact remains that they clearly exist.

If it is not a question of chronological differences (this view is preferable to me), to what cause must we attribute the sub-divisions? I think that we can exclude the possibility that they were only caused by different makers. Did they arise from different species of vases or from different destinations? In the first sub-division the probability would not be excluded that we have to do with a foreign maker, probably of Phoenician origin. But all this is merely conjecture, the main point for us is that the sub-divisions do exist.

(1) *LMLK ḤBRN*: 106 stamps.

(i) Twenty-six stamps (12: D/X; 4: Pal., Room K.12, No. 5280; 4: The stamps impressed on each of the four handles of the restored jar H.15, Room 1003, No. 5461 (see

C. H. Inge's *Postscriptum* to this article) ; 3 : H.17, Room 1089, No. 7163 ; 1 : Pal., Room K.12 ; 1 : Roadway, Room 1072 ; 1 : Section S. Gate). Plate VI, figs. 1–7.—See also *Iscrizioni*, pp. 118, 145 ff., and *passim*, and Tav. XVIII, fig. 9.

Various wares and colours.

Form : oval (which is not always regular) stamp, impressed longitudinally, always on the upper part of the handle, though at times it is impressed upside down (or rather the scarab is reversed with the head at the bottom. (Size,[1] in mms. : 40 × . . , (two stamps) 37 × . . , 36 × . . , 35 × 20, (two stamps) 35 × . . , (two stamps) 34 × . . , (four stamps) 33 × . . , 32 × 21, (two stamps) 32 × . . , . . X 20, (two stamps) . . × 19, . . × 18.

Decoration : Symbols (four winged scarabs) very marked ; almost completely stylized.[2]

Inscription : Disposition of the letters : four above the figure and four below. In general, the letters are archaic in form : they are rather tall (particularly the *lamed*, the *mem*, and the *resh*), crude, irregular (in this respect see specially the head of the *bet*, but also the stem of the *lamed*, the top of the *resh* and of the *nun*, and the whole of the *ḥet*), and we find absolutely no special characteristics of the early Hebrew alphabet (see particularly the *mem* and the *kaf*). This induces me to affirm that the moulds of these stamps were made at an earlier period than the others, or by a foreigner. In my opinion, the probability is excluded that the roughness of the inscription is due to the incapacity of the maker : one observes in this respect the beautiful impress of the scarab. If the emblem were the work of another craftsman, I do not consider it possible that a good artist would be chosen for the figure, while the epigraphy was carried out by an indifferent worker.

[1] It is not always possible to determine the size of the royal stamps. In most cases the stamp is not complete : either a part of it is missing, or the mark has been badly impressed (owing particularly to the shape of the handles), in such a way that only in a relatively few cases is the oval of the stamp more or less well preserved and the ascertaining of the size possible. The size given is mostly approximate. The numbers refer to the maximum height and width of the oval—indicates " uncertain."

[2] The descriptions are limited to essentials. *Cf.*, besides, *Iscrizioni*, pp. 117 ff., and *passim*.

(ii) Seventy-two stamps (37 : D/X ; 12 : Pal., Room K.12, No. 5280 ; 4 : D/X, No. 3048 ; 3 : Pal., Room K., No. 5274 ; 2 : NF. Room 188, No. 5238 ; 2 : Pal., Room P. ; 2 : K.15, Room 1031 ; 2 : L. 13 ; 1 : Pal., Room K.12 ; 1 : L.12, 2693 ; 1 : K.14, 2690 ; 1 : K.14/J.14, Pal.A.G. ; 1 : L.13, Room 1053, No. 6781 ; 1 : L.14 ; 1 : M.14 ; 1 : J.17, Room 1044). Plate VI, figs. 9–12.—See also *Iscrizioni*, *l.cit.*, and Tav. XVIII, fig. 8.

Various wares and colours.

Form : Similar to that of the precedent sub-division, but the figures are more stylized than those of that group.—Size, in mms. : 43 × . . , 40 × 26, 40 × 21, 40 × . . , 39 × 21, 38 × 21, 37 × 22, 37 × 21, (three stamps) 37 × 20, 36 × 21, 36 × . . , 35 × 23, (four stamps) 35 × 21, (three stamps) 35 × 20, (three stamps) 35 × . . , 34 × 21, (two stamps) 34 × 20, (four stamps) 34 × 19, (three stamps) 34 × . . , 33 × 23, (three stamps) 33 × 20 ½, (three stamps) 33 × . . , (three stamps) 32 × 21 ½, (three stamps) 32 × 20, (two stamps) 32 × . . , 31 × 20, 30 × 24, . . × 25, . . × 23, (three stamps) . . × 22, (four stamps) . . × 21, (two stamps) . . × 20, (two stamps) . . × 19.

Inscription : The disposition of the signs is identical with that of the first sub-division, but the letters are of quite different character : they are wider and shorter, altogether more squat, but also more precise. In general they present clear characteristics of the ancient Hebrew alphabet : particularly as regards the *mem* and the *kaf*, and also the *ḥet*, in which the vertical strokes go beyond (to the right) the horizontal upper stroke, and (to the left) the lower one.

One stamp (L.13) is very interesting : there are two impressions (both belonging to the Ḥebron II class) made one upside down upon another ; the last impression is fairly well preserved (except the lower line, of which there are missing the first two letters and a part of the third one), while of the old stamp there remains only the lower line ; in such a way that *le-melek* of the last impression is now to be seen just below *Ḥebron* (upside down) of the previous stamp.

(iii) Eight stamps (4 : D/X ; 2 : K.14/J14, Pal.A.G. ; 1 : H.17, Room 1089, No. 7164 ; 1 : D/X, J. 17, Road). Plate VII, figs. 4–6.—Another stamp had been found, in the

same locality (surface find), about 1900, by F. J. Bliss.—See also *Iscrizioni*, pp. 117 f., 145 ff., and *passim*, and Tav. XVIII, fig. 10.

No stamp is completely preserved, but almost all are intact as far as the lower part is concerned.

Various wares and colours.

Form : Analogous to those of the other sub-divisions, but the stamp is sometimes impressed in the length of the handle (that is, the emblem is reversed with the head at the top, and the wings at right and left ; or else, upside down). At times the stamp is impressed in the width (the emblem is reversed with one wing above and one below) ; at times it is impressed obliquely. Size, in mms. : 35 × 19, 33 × 21½, (two stamps) 31 × 21, (two stamps) 28 × 22, 27 × 22, . . × 22.

Decoration : The emblem is very different from those of the other sub-divisions (see for example *Iscrizioni*, l.cit.), and the two wings are much more stylized.

It is not proposed in this article to discuss the emblems themselves or their significance ; the winged scarab is quite clear, especially in the first group, but the identification of the two-winged object (of sub-division iii) is still questionable : the late Mr. Starkey suggested that it may be a bird.

Inscription : The arrangement is similar to that of the other sub-divisions : four letters above and four letters below the emblem. But the general aspect is, on the whole, rather different, because, as the emblem is placed with the wings along the longest side of the oval cartouche of the stamp, the letters of the inscription have more space. At any rate, on general lines, the epigraphy is very similar to that of the second sub-division.

There is not a great difference in the upper part : the usual *lamed* (here it has the stem slightly curved) ; the little vertical strokes of the head of the *mem* are not joined to the main stem, the tail at the bottom is rounder (a special characteristic, as already noted, of the ancient Hebrew alphabet). In the *kaf*, the main stem is like that of the *mem*, but is more inclined ; the head consists of two small strokes, almost parallel to each other, attached to the main stem. There is a major difference in the lower part, particularly in the form of the *ḥet* and of the *nun*. The *ḥet* with three strokes, as in the

other groups, shows slight differences in height, width and angle ; the two vertical strokes sometimes go beyond the horizontal strokes (to the left above, to the right below) ; in some stamps the upper horizontal stroke is very irregular : curved to cover the two vertical strokes like a roof. The *nun*, which is on the whole similar to the figure 4 in cursive script, has always a curved tail at the bottom, but the head presents different forms.

(2) L M L K Z(Y)F : Twelve stamps.

(i) Two stamps (2 : K.14/J.14, Pal.A.G.). Plate VI, fig. 8. —Another stamp had been found in the same locality (but surface find), about 1900, by F. J. Bliss.—See also *Iscrizioni*, *l.cit.*, and Tav. XVIII, fig. 3.

Form, emblem, and arrangement as in the first sub-division of the first group. Size, in mms. : 34 × 19, 33 ½ × 18.

Inscription : On general lines of Group 1,(i). The letters are very irregular (*cf.* the *mem* and the *kaf*), and are much elongated in form. A special point : the *yod* of *Zyf* is upside down, and the third letter of the first line has been corrected : the craftsman had probably first incised a *kaf* which he then altered to a *lamed* (was he a foreigner, a Phoenician, for example ?).

(ii) Three stamps (2 : D/X ; 1 : G.14, Room 1009, No. 5519). Plate VI, fig. 13.—See also *Iscrizioni*, *l.cit.*, and Tav. XVIII, figs. 2 and 5.

Arrangement as in the previous sub-division, but the emblem is more stylized and more regular. Size, in mms. : 38 × 23, 37 × 22. In the stamp No. 5519, there are no traces of the scarab ; there remain only some traces of the inscription, particularly the *pe* of *Zyf*. It is doubtful whether the emblem had been impressed at all.

Inscription : Analogous on general lines to 1, (ii). The letters are more squat and more precise than those of 2, (i). The form of the characters is clearly early-Hebrew. *Cf.* in this connection the well preserved letters : the *zayin*, the *pe*, and the *kaf*, of the others only traces remain. In *Zyf* there is *scriptio defectiva*. Each word is followed by a stop.

(iii) Seven stamps (4 : D/X ; 1 : K.14/J.14, Pal.A.G. ; 1 : K.15 ; 1 : J.15, No. 1017). Plate VII, figs. 7–9.—See also *Iscrizioni*, *l.cit.*, and Tav. XVIII, figs. 6–7.

Arrangement and emblem as in sub-division 1, (iii). The stamps are very badly preserved. Size, in mms.: 33 × . . , 28 × 21, 27 × 20½, (two stamps) . . × 22.

Inscription : Analogous on general lines to 1, (iii). The shape of the letters is clearly early-Hebrew. *Scriptio plena* (as far as one can judge from four stamps, while in the others it is not possible to distinguish). The stamps were impressed from different moulds.

(3) *L M L K S W K H* : Twenty-five stamps.

(i) No examples present the characteristics of the first sub-division of the groups of Ḥebron and Zyf.

(ii) Seventeen stamps (9 : D/X ; 2 : Pal.A.G., No. 5280 ; 2 : L.12 ; 1 : Pal.A.G., No. 5280 ; 1 : D/X, No. 3049 ; 1 : L.13, Room A.D. ; 1 : K.12. Plate VI, figs. 14–16, and Plate VII, figs. 1–2.—See also *Iscrizioni*, *l.cit.*, and Tav. XVIII, figs. 4 (?) and 11–14.

In none of the stamps is the whole inscription preserved (*cf.*, however, *Iscrizioni*, *l.cit.*) ; in some of them only the upper part, with traces of the lower, remains, while in others only the lower half exists. At any rate it is possible to recognize that the impress of the inscription has not always been made by the same mould, though it cannot be said how many there were. In any case all the stamps show the same characteristics.

Form, emblem, and arrangement as in the second sub-division of the first two groups. Size, in mms.: 39 × 20, 36 × 21, 35 × 23, 34 × 22, 34 × 20, (two stamps) 34 × . . , 32(?) × . . , . . × 24, . . × 23, (two stamps) . . × 22, . . × 21, . . × 20.

Inscription : The main characteristics correspond to those of sub-division (ii) of the groups of Ḥebron and Zyf, but here the letters are impressed even more clearly, so that it is possible to recognize with more certainty some characteristics of the ancient Hebrew alphabet : see the round bases of the stems of the *mem* and of the *kaf*. The *lamed* is more angular. The head of the *mem* presents slight differences ; the head of the *kaf* has the shape of a Greek *psi* (ψ). There is little to say about the *shin* : it may be wider or narrower, taller or shorter, but the variations are not of importance. The *waw* consists of a long oblique stroke, sloping at the top

towards the left, cut by an oblique tail, and terminated above by a little stroke. Finally the *he* is extremely characteristic: it is very oblique, has four horizontal strokes, and the uppermost one of these goes beyond the main stem.

(iii) Eight stamps (2: D/X; 1: Roadway, 1072; 1: H.17, 1089; 1: G.17; 1: P.17, Great Shaft; 1: K.14/J.14, Pal.A.G.; 1: D/X, No. 3049). Plate VII, figs. 10–12. —See also *Iscrizioni*, *l.cit.*, and Tav. XVIII, figs. 15–16.

Form, emblem and arrangement as in 1, (iii) and 2, (iii). Size, in mms.: 38 × 20, 37 × . . , 35½ × 21½, 34½ × 23, 33 × 20½, 32 × . . , . . × 23, . . × 22, . . × 20½.

Inscription: In this sub-division also, different moulds can be recognized, but one still finds the same general characteristics, like those of the third sub-division of the first two groups, in the arrangement of the inscription and the form of the letters.

Examination of the individual letters shows: in the *mem* the vertical strokes of the head are not connected with the main stem; the shape of the *waw* is excellent: a vertical stem, curved above towards the left is cut by a hook. The ligature between the *kaf* and *he* is very elegant. This last has three horizontal strokes: the upper one does not go beyond the stem; the middle stroke is a little longer than the upper, and the lowest stroke is shorter than the middle one. Each word is followed by a point.

(4) *L M L K M M SH T*: Six stamps.

(i) This sub-division is not represented.

(ii) One stamp (D/X). Plate VII, fig. 3.—See also *Iscrizioni*, *l.cit.*, and Tav. XVIII, fig. 17.

Form, emblem and arrangement as in the second sub-division of the other groups. Size, in mms.: 35 × 21½ (approximate).

Inscription: Only two *mem* remain (of *M M SH T*), which are not well preserved. They are, however, sufficient to assign this stamp to the sub-division (ii): note the clear characteristic of the ancient Hebrew alphabet in the roundness of the base of the *mem*.

(iii) Five stamps (3: D/X; 1: J.15, No. 7081; 1: H.17, Room 1078, No. 7071). Plate VII, figs. 13–15.—See also

Iscrizioni, *l.cit.*, and Tav. XVIII, figs. 18–19.—Some stamps found in Gezer (*Iscrizioni*, p. 145 *e*), Tav. XVIII, fig. 20) and Jerusalem (P. H. Vincent, *Jerusalem sous terre. Les récentes fouilles d'Ophel*, 1911, pp. 33 sg.; and the English edition: *Underground Jerusalem. Discoveries on the Hill of Ophel* (1909–11), 1911, p. 30, Plates XIII and XIV *d*),—which belong to the same group, contain only the word *M-M-SH-T* (i.e., without the word *le-melek*) impressed above and not below the emblem.

Form, emblem, and arrangement as in the third sub-division of the other groups. Here, too, different moulds can be recognized, but all the stamps present the same general characteristics.—Size, in mms. 36 × 20, 33 × 22, 32 × 21½, 31 × 20, 29 × 19.

Inscription: The vertical strokes of the head of the *mem* are joined to the main stem. The *taw* is in the form of an ×. The single words are followed by a point (at least in one mould). On one handle, there is above the stamp to the right the impress of two concentric circles with a point in the middle: (Plate VI, fig. 15) this object, which is not visible in the photograph is below the emblem to the right.

(*d*) *Royal Stamps with Doubtful Place-names.*

Besides the stamps described above, on which the name of the city of manufacture is more or less clearly marked, there are a certain number of royal stamps where this indication is lacking. Some of these are fragmentary, and others have been very badly stamped, so that the lower part is not visible.

Two stamps belong to the first sub-division, but it is not possible to tell to which group or groups: one fragment (D/X) only bears the upper part of the inscription and the emblem; the other one (D/X; size: . . × 20 mm.) is complete, but the lower part has been so badly stamped that no trace of lettering can be seen.

In one stamp (Pal., Room K., No. 5274) only most of the emblem remains, below which there appears to be a *bet*: in this case it would be a Ḥebron stamp; while in another stamp (K 13) most of the emblem only is preserved, but below there are traces of some other figure: perhaps the remainder of a previous impression. Both these stamps seem to belong to the second sub-division, but it is not certain.

There are twelve other stamps (6 : D/X ; 1 : Pal., No. 5280 ; 1 : L.13, 2719 ; 1 : G.17, Room 1072, No. 7068 ; 1 : H.15, Room 1089, No. 7163 ; 1 : Pal., Room K., No. 5274 ; 1 : Section of cross wall south of gate) which belong to the second sub-division. Size, in mms. : (two stamps) 32 × . . , (five stamps) . . × 21, (four stamps) . . × 19.

In two stamps (No. 7068 and No. 7163) the lower part is missing, in the others it has been so badly impressed that nothing can be seen. Comparing these stamps with those where the place-name is preserved, it might be possible to make some attempt at an attribution for them, but it would be quite unprofitable. The letters which are preserved demonstrate clearly that the impression was made by different moulds. It is visible in the shape of the individual signs, particularly in that of the *mem*.

On two handles (2 : D/X) there are only the concentric circles ; one of them (diameter : 20 mm.) has two circles with a point in the centre, while the other one (diameter : 11 mm.) has a point in the middle of a single circle ; as all the royal stamps (with clear place-names) decorated with concentric circles, so far found, belong to the third sub-division, it is highly probable that the missing stamps of the above two handles belonged to that sub-division.—Another handle (D/X) has two badly preserved concentric circles (maximum diameter : 17 mm.) with a point in the middle, but it bears also traces of a stamp (size : . . × 21 mm.) belonging to the third sub-division.

Another stamp belonging to the same sub-division and with uncertain place-name had been found at Lachish (surface find), about 1900, by F. J. Bliss.

There is, finally, a very interesting stamp (K.14/J.14, Pal.A.G. ; size : 33 × . . mm.), which also belongs to the third sub-division. Owing to the shape of the handle, the stamp has been badly impressed, particularly in the lower part, in such a way that there is lack of space for the place-name. It seems that the maker desired to solve this problem by an artifice, and tried to impress the place-name over the figure : if this suggestion is right, the traces which we see in the figure would be the remains of a *shin* and of the head of a *waw*, and

in such case it would be a Sokoh stamp. But it is also quite possible that the traces on the emblem belong to the decoration of the stamp, so there would not be any remains of the place-name.

Royal Stamps found at Lachish :
Summary : The Place-names and the Sub-divisions.

City	Ḥebron	Zyf	Sokoh	*MMSHT*	Doubtful place-name	Total
Sub-division i	26	2	—	–	2	
(found about 1900)		1				31
Sub-division ii ...	72	3	17	1	12	105
Sub-division iii	8	7	8	5	4	
(found about 1900)	1				1	34
Doubtful sub-division (i or ii)	—	—	—	–	2	2
Total	107	13	25	6	21	172

It would be useful to compare this résumé with the results (about 250 stamps) of the excavations in all the other Palestinian places concerning the royal stamps, but it is quite impossible to do it now. So I mention only the results of Bliss' excavations at Tell Zakarîya, Tell eṣ-Ṣafîyeh, Tell el-Judeideh, and Tell Sandahannah (all of them near Beit Gibrîn), in the years 1898–1900.

City	Ḥebron	Zyf	Sokoh	*MMSHT*	Doubtful place-name	Total
Sub-divisions i and ii	4	5	9	9	14	41
Sub-division iii	8	4	11	1	12	36
Total	12	9	20	10	26	77

A comparison of the two summaries shows quite different proportions both in the sub-divisions and in the place-names (see for example the proportions of the Ḥebron—and the *MMSHT*—stamps) :

	Sub-divisions i and ii	Subdivision iii	Total
Lachish	80.23%	19.77%	100%
Other Tells	53.25%	46.75%	100%

	Ḥebron	Zyf	Sokoh	*MMSHT*	Doubtful place-name	Total
Lachish	62.21%	7.56%	14.53%	3.49%	12.21%	100%
Other Tells	15.58%	11.69%	25.98%	33.76%	12.99%	100%

(*e*) *Uninscribed Stamps with Symbols.*

There are as well some uninscribed stamps with symbols. As these do not enter into the scope of this study, it is only necessary to mention them.

Nineteen stamps (14 : D/X ; 1 : L.14 ; 1 : L.12, Room 1067, No. 6835 ; 1 : Gate N. Wall ; 1 : L.14/M.14 ; 1 : G.17, Room 1071, No. 7067) : the emblem is a rosette in various forms and sizes. Diameter : (three stamps) 12 mm., (two stamps) 13 mm., (six stamps) 15 mm., (two stamps) 16 mm., (three stamps) 17 mm., (2 stamps) 20 mm. : all approximate. One stamp is oval (size : 15 × 10 mm. approx.).

One stamp (D/X, diameter : 13 mm.) : a circle with a point in the centre.

Two stamps (2: D/X; size, in mms.: 15 × 11, 15 × 9½): other geometric motifs.

One stamp (D/X) : an irregular trapezoid (mms. : 18 × 17 × 13 × 16).

One handle (D/X) with an irregular geometrical figure (13 mm. × 11 mm.), not stamped but incised after firing ; it is perhaps an attempt to represent a " shield of David."

Two stamps (2 : D/X) : a cross in relief stamped in a hollow surround (diameter : 12½ mm., and 12–14 mm. approx.).

One stamp (D/X) : in an irregular field (a kind of rectangle with rounded corners), two vertical lines in relief cut by two horizontal lines.

One handle (D/X) : three horizontal strokes (about 21 mm.

each), cut by a vertical one (30 mm.) and an oblique line (25 mm.), which meet on the upper horizontal stroke.

Two stamps (2 : D/X) : a little mark (mms. 11½ × 10) impressed with a human figure in relief.

See also the stamp No. 20 (group *b*) in the first part of this article.

(II) SEALS.
(Plate VIII).

It will be superfluous to re-publish all the seals which were found by the Wellcome-Marston Archaeological Research Expedition to the Near East at Lachish, but I mention them to make the record complete.

(1) לחלקיהו " (belonging) to Ḥilqiyahu
בן מאפס son of Meappes "

Plate VIII, fig. 1.—It would belong to the Group III of *Iscrizioni*.

A stamp of a seal.—See: S. H. Hooke, *PEF QS* LXVIII, 1936, p. 118 ; J. L. Starkey, ibid. pp. 188 f., and Plate VI, fig. 2.—Both of them read " for Hilkiah the son of Maas." G. R. Driver (*PEQ* LXX, 1938, pp. 191 f.) gives the correct reading, which has been accepted also by P. H. Vincent (*RB* XLVIII, 1939, pp. 428 ff.).

(2) סמכ(א) Semak(e)=
לאחמלך 1 Aḥimelek = Semakel (son of) Aḥimelek.

Plate VIII, fig. 2.—This seal would belong to the Group IV of *Iscrizioni*.

See : S. H. Hooke, *PEF QS* LXVII, 1935, pp. 11, 38, and 197, Plate XI, lower part ; J. L. Starkey, ibid., p. 206 ; S. A. Cook, ibid., 1936, p. 77 ; N. Walker, ibid., 1938, p. 259. All of them read : סמך לאחמלך. Concerning the meaning, *cf.* Hooke (and suggestion of Sidney Smith) : "support for Aḥimelek " ; while Walker thinks that the royal winged scarab (which is represented on the seal) indicates a king, so that the contents of the seal may be " support of the King for Aḥimelek."—U. Cassuto (*Riv. degli Studi Orient.* XVI, 1935) and I (" Bibliofilia " XL, 1938, p. 8) read as indicated above. And, finally, P. H. Vincent (*art. cit.*) reads: לאחמלך סמך = " A Aḥimélek (fils de) Samak."

(3) לשבנא " (belonging) to Shebna
אחאב (son of) Aḥab "

Plate VIII, fig. 3.—*Iscrizioni*, Seals, Group IV, No. 57.

See also : S. H. Hooke, *PEF QS* LXVI, 1934, pp. 97 f., and Plate VII, figs. *a* and *b* ; S. A. Cook, ibid, 1936, p. 77 ; P. H. Vincent, *art. cit.*

N.B. The examination of the original (it clearly shows certain strokes, tails and traces which are not too plain on the photograph, and vary somewhat from the drawing published by Prof. Hooke and myself) gives me opportunity to make an addition to *Iscrizioni* :

The inscription is enclosed in a nearly circular line. The three *alef* are not identical ; also the forms of the two *bet* are unlike. The *ḥet* has, as it seems to me, three horizontal strokes : the two upper ones are so near that they appear to be a single stroke only. The first *bet* is not only connected with the following *nun*, but also with the precedent *shin*, and the *nun* is connected with the following *alef*. Owing to lack of space, this last letter of the first line is not complete. The first letter of the second line touches the circle on one side, and the last letter on the other one.

(4) לשפטיה " (belonging) to Shefaṭyah-
ועשיהו u (son of) 'Asayahu "

Plate VIII, fig. 4.—This seal would belong to the Group IV of *Iscrizioni*.

See : J. L. Starkey, *The Illustrated London News*, 1937, p. 968 ; idem, *PEF QS* LXIX, 1937, pp. 177 and 230 f., and Plate VIII, figs. 2 (upper and lower part) ; D. Diringer, *art. cit.* ; P. H. Vincent, *art. cit.*

(5) לגדליהו " (belonging) to Gedalyahu
(א)שר על הבית he who is over the House "

Plate VIII, fig. 5.—A stamp of a seal ; it would belong to the Group VII of *Iscrizioni*.

See : S. H. Hooke, *PEF QS* LXVII, 1935, pp. 11 and 195 f., and Plate XI, upper part ; J. L. Starkey, ibid., p. 206 ; L. R. De Vaux, *RB* XLV, 1936, pp. 96–102 ; S. A. Cook,

art. cit.; U. Cassuto, *art. cit.*; J. L. Starkey, *PEQ* LXIX, 1937, p. 173; D. Diringer, *art. cit.*; N. Walker, *art. cit.*; P. H. Vincent, *art. cit.*

(6) This sixth seal (D/X; No. 5353) has not yet been published.—Plate VIII, fig. 6.[1]

Form: Nearly circular, size: mms. 14 × 15. Burnt steatite. Grey. Perforated. Very badly preserved.

Inscription: Enclosed in an irregular circle line, and divided into two registers, separated by a double stroke, also irregular. There are four letters in the upper line, and probably four in the lower one. As usual, the inscription has been incised in the reverse way. The whole inscription may be read:

לשלם
===
עחעש

The upper line is almost legible. The letters are: *lamed*, *shin*, *lamed*; the last sign is perhaps a *mem*, but in a quite unusual form.—The lower line is on the whole indecipherable. The letters may be: '*ayin*, *ḥet*, '*ayin*, *shin*, but all of them are doubtful, especially the first three of them.

While the *n.p.* (*Shallum* or *Shillem*) of the owner of this seal is a well-known name (see also this article, I Part, stamp No. 5), his patronymic is obscure.

(III) TWO INSCRIPTIONS ON VASE FRAGMENTS

(*a*) *The Royal Bat.*

(Plate IX).

Six fragments (H.17, Room 1072, No. 7066) belong to the upper part of a water jar; the circumference of the mouth was originally about 256 mm.

Colour: Buff.

Inscription: Engraved in the clay before firing. Though the first letter is not complete, the reading is clear:

"the royal *bat*" = בת למלך

On the whole the letters are very irregular. Only the head remains of the *bet* (mms. 13 × 9) with a little part of the main

[1] Drawing made by Miss Olga Tufnell.

stem (13 mm. in height). The *taw* is the shape of an irregular × (mms. 16 × 14). The *lamed* is very tall (48 mm. approx.) and is very irregular in the base. The *mem* : the head is rather archaic in form ; the stem lacks part of the base (the preserved portion is 20 mm. high, while the head is 13 mm.). The second *lamed* is even longer (at least 64 mm.). Finally, the *kaf* consists of a long stem (56 mm.) which may have been even longer, for a small part may be missing from the base, which is rounded. At the top, two irregular strokes branch off from it to the left, one about 24 mm. long, and the other about 18 mm.

As to the meaning of the inscription, there is no doubt that it gives the indication of the Biblical measure of capacity—the *bat*—(as already noted by C. H. Inge : *cf.*, *PEQ*, LXX, 1938, p. 253), a measure which was supposed to correspond (see below) to an amount of 36.44 litres (see *Iscrizioni*, p. 290). The inscription *b-t* is found on another fragment, excavated at Kiryat Sefer by Prof. Albright (see *Iscrizioni*, Weights and Measures, No. 25). In the Tell ed-Duweir fragment it is a " royal " *bat* : *la-melek*,=" for the king, of the king, belonging to the king," indicating, apparently, the official character of the measure, and its conformity to the governing system (*cf.*, *eben ha-melek* in 2 *Sam.*, 14 26, and the weight למלך, in *Iscrizioni*, pp. 280 ff.). Supposing the existence of a great variety of weights and measures probably in use in the country (*cf.*, *Iscrizioni*, p. 151), there is nothing strange in the existence of a " royal " system. Too few fragments remain to make a check on the value to be attributed to-day to the unit of a *bat* or of a " royal " *bat* : see, however, Mr. Inge's *Postscriptum*.

Dating : C. H. Inge, *PEQ*, *l.cit.*, attributes the inscription, evidently on archaeological grounds, to the " late Jewish period " : for strictly epigraphic reasons, I should be more inclined to place it much earlier, unless of course it was the work of an unskilled person, when it is very difficult to be sure of the period.

(*b*) *Remains of another Inscription.*

(Plate XI, Fig. No. 2)[1]

One fragment (D/F. 18 A, No. 5248, outside outer gate),

[1] Drawing made by Mrs. David Diringer.

irregular in shape (size : length mms. 56–66, width mms. 39–52, thickness 6–8 mms.).

Inscription : Incised in the clay before firing. Only the first letter—a *resh*—is preserved, and the right side of the following letter, which was probably a *pe*, unless it could have been an *'ayin* or another letter very irregularly shaped. The head of the *resh*, like the parts preserved of the following letter, are not regular in line, which is easily explained by the difficulty of incision of curved lines in the clay.

It is impossible to attempt a reconstruction of the original inscription.

N.B. I take the opportunity to express my deepest gratitude to the Society for the Protection of Science and Learning (now in Cambridge), and especially to the Chairman of its Executive Committee, Sir Frederic G. Kenyon, G.B.E., K.C.B., D.Litt., LL.D., F.B.A., and to the Secretary, Miss Esther Simpson, B.A. The grant given me by the Society has enabled me to do my research work at the Institute of Archaeology.

POST-SCRIPTUM.

By Charles H. Inge.

(Plate X).

The greater number of the stamped jar handles from Tell ed-Duweir come from unstratified surface deposits. A good proportion, however, were found with the remains of broken jars in houses. Although the levels concerned have not yet been completely co-ordinated, it is safe to say that the jars occur both in the stratum contemporary with the Lachish Letters and in that immediately below it. They were therefore in use during and before the reign of Zedekiah, the last king of Judah (597–586 B.C.). No evidence for the early limit of their occurrence is yet available. These general remarks refer to royal stamps of both scarab and bird types and to the private seals. The following incomplete notes may be of value.

In a lecture published in the *PEFQS* of October, 1938, p. 253, I referred to a jar fragment from the pre-Zedekiah level, which bore on the shoulder an incised inscription reading

BTLMLK—"Royal *Bat*." The "*Bat*" was the Hebrew liquid measure corresponding to the "*Ephah*." I suggested that the LMLK seals might have indicated that the jars on which they occurred held this measure under royal warrant.

This point of view was set out in brief long ago by Père Vincent. He wrote of the LMLK jars in "Canaan" (p. 359) as "intended, if you will, to contain tax contributions in kind, and more simply still, to facilitate trade by constituting current measures, sanctioned by royal control at the factory." It may be added that, on Biblical authority, not only taxation but commerce as well was largely carried out in kind (*cf.*, 2 Chron. ii., 10, 15), and that the giving of "scant measure" was "abominable."

Père Vincent's valuable suggestion has never been followed to its logical conclusion, because until now, no jar with a royal seal has ever been found complete, and the arguments, which have flowed so copiously round the subject, have taken other courses. But now from Tell ed-Duweir we have been able to reconstruct two jars, one bearing a royal and the other a private seal. I suggest that both of these were intended to hold the standard official "*Bat*," the largest Hebrew measure of capacity which could be transported as a unit. The first jar (H.15, Room 1003, No. 5461) found in a room of a house or shop, has been put together in London by Miss Olive Starkey. It is stamped on each of the four handles with LMLK ḤBRN and the scarab symbol, and is the only known complete example in existence. The form is ovoid, the best shape for strength, and aesthetically far more attractive than the contemporary types found in tombs. The potting is extremely skilful. A second jar (G.14, Room 1008, No. 5400) also restored, bears on one handle a private seal, reading LSHLM(H) AḤSMK. It is less carefully made than the LMLK jar, but seems intended to be of the same size. The girth is exactly the same, and the height to the base of the neck, which is missing, is only $\frac{3}{4}$ in. greater. Both these jars probably date from the reign of Zedekiah. The fragment with the BT LMLK inscription was from a jar with a similar neck and shoulder, though it was apparently rather smaller. The clay is very different however, and there is no indication of the form of the lower part.

The capacity of the LMLK jar to the base of the neck, calculated from measurements, is 9.969 Imperial Standard Gallons or 45.33 litres. That of the jar with the private seal is 10.27 gallons or 46.667 litres. The difference of about 3 per cent. is not sufficient to damage the theory that the two jars were intended to hold the same quantity.

The only Hebrew measure which could approach 10 gallons is the *Bat*. The values usually quoted for it are around 8 gallons, but vary considerably. They are based mainly on equivalents of Hebrew to classical measures given by late writers, of whom Josephus is the earliest. It would be surprising if in six centuries, in which anarchy alternated with foreign rule, and which culminated in the Hellenization of Palestine and Syria, no change occurred in the native standards of weight and measure. It would be still more surprising if the standard units increased in value, when their correctness ceased to be enforced by authority.

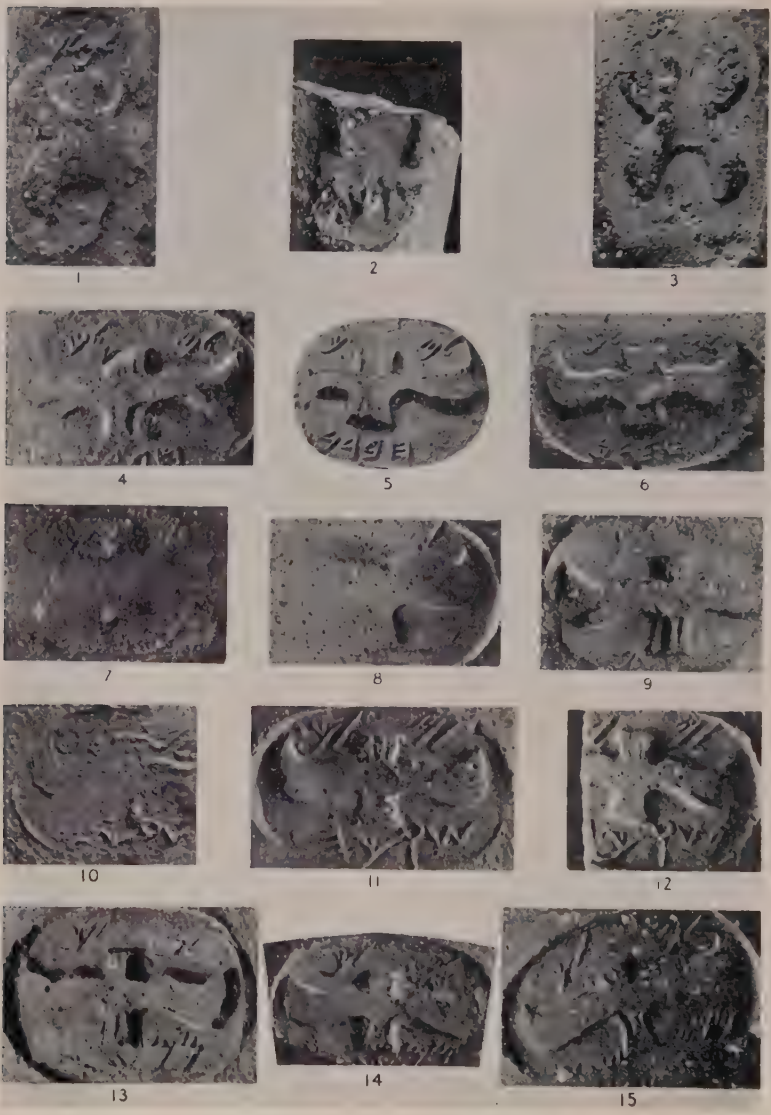
It is evident from this inscription that the usual translations of LMLK as " for the king " or " belonging to the king " are misleading though not of course inaccurate. They have led people to suppose without further consideration that the seals referred to the contents of the jars, which were thus docketed or guaranteed in quality for purposes of taxation. The natural place for such a stamp would be the stopper. It is far more likely that an official mark in the fabric of a vessel should guarantee either the quality or the capacity of the vessel itself. In this case LMLK should be translated into English by an adjective. Good modern parallels are " Royal Potteries " and " Imperial Standard Gallon."

Because the jars are obviously utilitarian rather than ornamental, and in view of the recognized fact that they all conform to one type, it is likely that the capacity was in question rather than the quality. But in any case, whatever the purpose of the jars, it is in the highest degree probable that both they and vessels stamped with private seals held a recognized measure, as do the beer bottles, milk bottles and tumblers of the present day.

To summarize the views set out above I suggest :

(1) That LMLK perhaps stands for BT LMLK. This becomes more probable if the possibility be recognized that

ROYAL STAMPS (I).
($\frac{1}{2}$ Size).



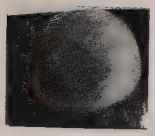
ROYAL STAMPS (II).
($\frac{1}{2}$ size).

1

(a)

2 (b)

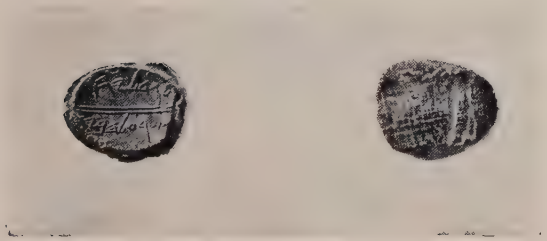
(a)



3 (b)

(a)

4 (b)

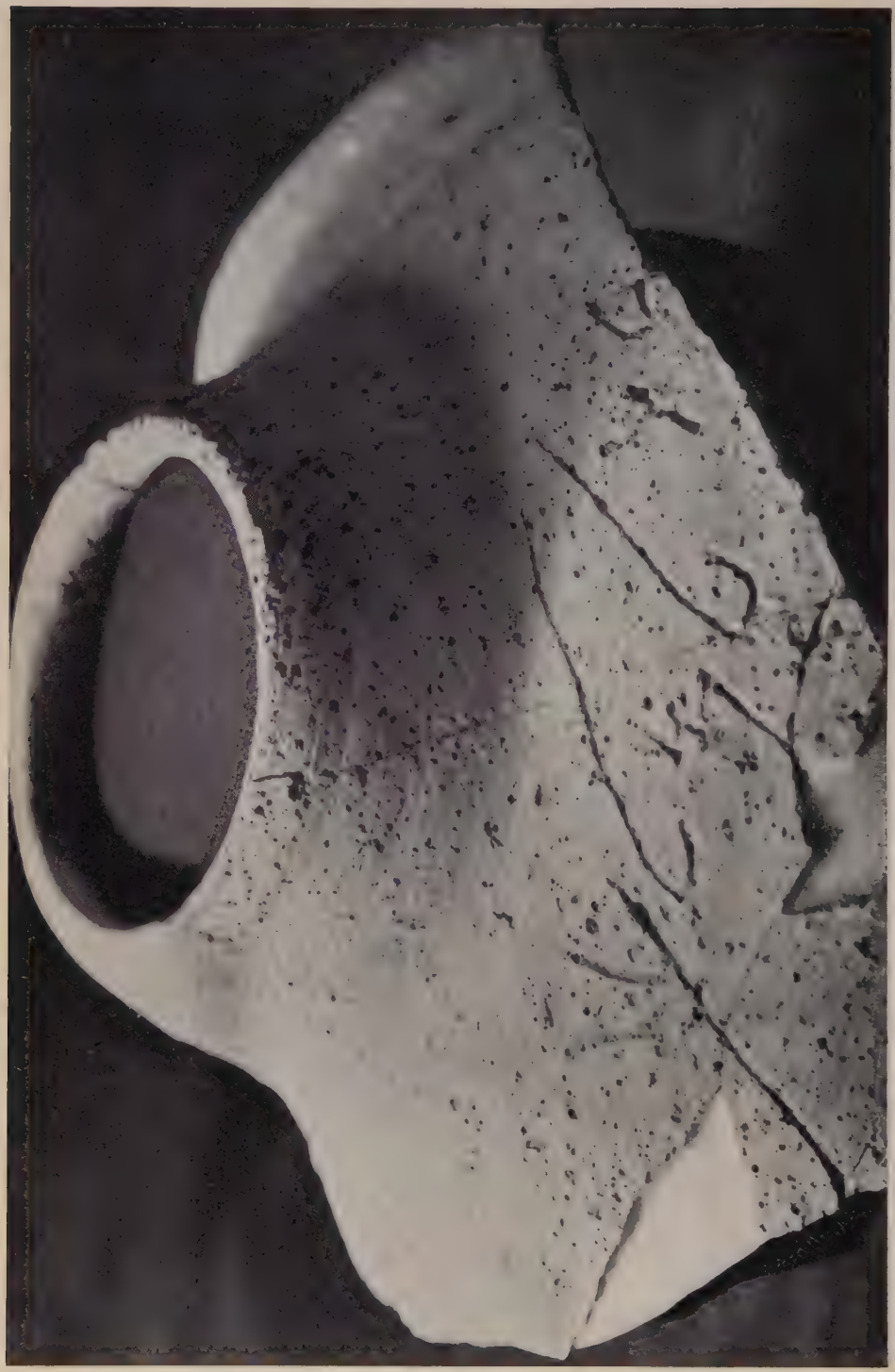


(a)

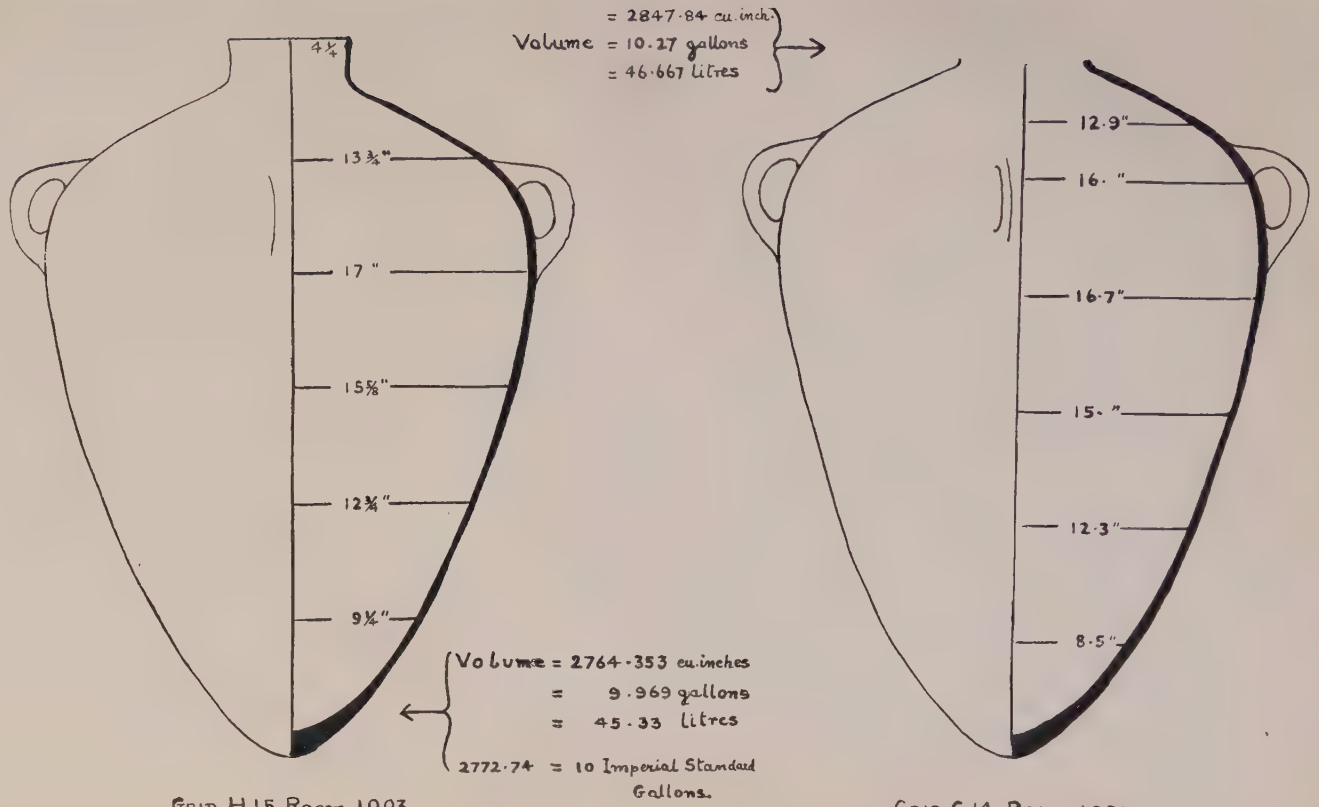
5 (b)

6

SEALS.



THE ROYAL BAT (original size).



GRID H 15 Room 1003
5461

GRID G 14 Room 1008
5400

THE ROYAL BAT—Details of Reconstruction

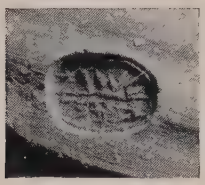


FIG. 1: A PRIVATE STAMP.
(Original size).

FIG. 2: REMAINS OF AN INSCRIPTION.
(Original size).

the jars themselves were called colloquially by the name of the measure they contained, a usage for which there are modern parallels in Arabic.

(2) That, whether (1) be valid or not, the LMLK jars and many of the jars with private seals were intended to hold the "*Bat*" measure.

(3) That the "*Bat*" of the pre-exilic period was considerably larger than at the time of Josephus and stood at about ten gallons.

THE DATE OF THE EXODUS

By A. Lucas

Since, in connection with both the entry of the Israelites into Egypt and their exodus from Egypt, reference will be made to the ancient Egyptian records, it is necessary to give a brief account of the history of Egypt during these periods.

Egyptian history was divided by the Egyptians themselves into thirty Dynasties, each of which corresponds to a different Royal House, analogous to the division of English history into the Houses of Normandy, Plantagenet, Tudor, Stuart, Hanover and so on. The possible period covering both the entry and the exodus comprises the Twelfth to the Nineteenth Dynasties inclusive which are dated as follows :[1]

XIIth Dynasty	2000–1788 B.C.
XIIIth to XVIIth Dynasties	1788–1580 B.C.
XVIIIth Dynasty	1580–1350 B.C.
XIXth Dynasty	1350–1205 B.C.

The XIIth dynasty was a time of strong rule with the usual accompaniments of peace and prosperity, during which I suggest that the Israelites entered Egypt.

Early in the XIIIth dynasty there began a period of civil war and confusion, about which very little is known, except that the country became divided into a number of small kingdoms and thus was an easy prey to foreign aggression. Not earlier than about 1780 B.C. Egypt was invaded by certain Asiatics, who first conquered the Delta and ultimately laid the whole country under tribute. These invaders were the Hyksos, the so-called " Shepherd Kings," about whom little is known, except that they ruled Egypt for nearly 200 years and were expelled about 1580 B.C.

The XVIIIth dynasty ushered in the New Kingdom or Empire, which lasted until the end of the XXth dynasty. Soon after the beginning of the XVIIIth dynasty, Egypt

[1] The chronology adopted is that of Breasted (J. H. Breasted, *Ancient Records of Egypt*, I, pp. 42–44) and not that of Petrie.

conquered, and towards the end practically lost, the countries then known as Canaan, now Palestine and Syria, and for a long time Egypt was a great power in western Asia. This dynasty included the reigns of Tuthmosis III (1501-1447 B.C.) and of his son Amenophis (Amenhotep) II (1447-1420 B.C.), the suggested pharaohs of the oppression and exodus respectively.

The XIXth dynasty included the reigns of Ramesses II (1292-1225 B.C.) and of his son Meneptah (1225-1215 B.C.), who are thought by some to have been the respective pharaohs of the oppression and exodus. During the early part of this dynasty Egypt recovered for a time her Asiatic possessions.

In any consideration of the date of the exodus, manifestly the first step should be to ascertain what the Bible says about it, which is as follows: "And it came to pass in the four hundred and eightieth year after the children of Israel were come out of the land of Egypt, in the fourth year of Solomon's reign over Israel . . . he began to build the House of the Lord." (I Kings, 6 : I.)

The accession of Solomon can be fixed with a considerable degree of accuracy from secular history as having taken place about the year 970 B.C.[1] and, therefore, the beginning of the temple in the fourth year of his reign was about 966 B.C. and, by adding 480 to 966, the year 1446 B.C. is obtained as the date of the exodus, which was during the reign of AmenophisII of the XVIIIth dynasty, who, therefore, according to this calculation, was the pharaoh of the exodus, and, since he reigned from about 1447 B.C. to about 1420 B.C. it must have taken place in the early part of his reign. This would make Tuthmosis III (1501-1447 B.C.) the father and immediate predecessor of Amenophis II, the pharaoh of the oppression.

If 1446 B.C. be accepted as the approximate date of the exodus, then the entry of the Israelites into Egypt must have taken place about 1876 B.C. (1446—430=1876), 430 years being the length of the sojourn in Egypt (Exodus xii, 40, 41 ; Galatians iii, 17). The year 1876 B.C. was during the reign of Sesostris III of the XXIIth dynasty (1887–1849 B.C.) who,

[1] (a) S. A. Cook, *Cambridge Ancient History*, I, p. 160 ; (b) T. E. Peet, *Egypt and the Old Testament*, p. 54 ; (c) J. W. Jack, *The Date of the Exodus*, p. 201.

therefore, by this method of reckoning, was the pharaoh who appointed Joseph to his high position.

The oppression of the Israelites was due to their greatly increasing numbers, which gave rise on the part of the Egyptians to the fear that at some future time they might become so numerous as to be a menace to the country by siding with an invader. Egypt, therefore, probably still retaining a bitter memory of what she had suffered during the period of the Hyksos domination, and determined to prevent the recurrence of a similar disaster (since Goshen, where the Israelites were settled, formed a vulnerable gateway into Egypt) imposed hardships on them, which increased in severity as time went on. The Biblical account of this is as follows: "And the children of Israel were fruitful, and increased abundantly, and multiplied, and waxed exceeding mighty; and the land[1] was filled with them" (Exod. i, 7). "Now there arose a new king over Egypt, which knew not Joseph. And he said unto his people, Behold, the people of the children of Israel are more and mightier than we: come, let us deal wisely with them; lest they multiply, and it come to pass, that, when there falleth out any war, they also join themselves unto our enemies, and fight against us, and get them up out of the land. Therefore they did set over them taskmasters to afflict them with their burdens. . . . And the Egyptians made the children of Israel to serve with rigour: and they made their lives bitter with hard service . . ." (Exod. i, 8–14; Acts vii, 17–19).

The expression "Now there arose a new king over Egypt which knew not Joseph," at first sight might seem to mean that the pharaoh who was Joseph's patron, having died, his immediate successor began to oppress the Israelites, which is assumed by many people to have been the case. It cannot, however, have been so, since it is impossible for the Israelites to have increased to the extent stated during the lifetime of the pharaoh under whom the original seventy entered Egypt. Also, "Joseph was thirty years old when he stood before Pharaoh King of Egypt (Gen. xli, 46), and he lived to a great age (Gen. l, 22, 26), the 110 years given probably meaning no

[1] The land of Goshen, not the land of Egypt.

more than this, therefore, since Sesostris III reigned for thirty-eight years, if he were Joseph's pharaoh, he must have reigned for at least fourteen years after he had raised Joseph to power (the seven years of plenty and the seven years of famine), and Joseph, still holding his high office, must have lived a considerable time after his patron's death, probably well into the next reign, that of Amenemhet III (1849–1801 B.C.). Since Joseph's fame and the position of his family would have protected his other and more distant relations for many years after his death, it is improbable that there was any persecution for a long period afterwards. The only statements in the Bible that would seem to contradict this are : " and they shall afflict them four hundred years " (Gen. xv, 13), and " they should bring them into bondage, and entreat them evil four hundred years " (Acts vii, 6), the first being from a dream of Abram, that occurred long before the Israelites saw Egypt, and the second from a speech by Stephen some fifteen hundred years after the exodus. In my opinion, it is most unlikely that there was any oppression until after the expulsion of the Hyksos (about 1580 B.C.) and probably not until the reign of Tuthmosis III (1501–1447 B.C.).

Between 1876 B.C., the suggested date of the entry of the Israelites into Egypt, and 1446 B.C., the suggested date of the exodus, there were about twenty-seven years of the reign of Sesostris III, then three more pharaohs of the same dynasty, who altogether reigned about sixty-one years (1849–1788 B.C.) ; then a period of about 208 years (1788–1580 B.C.) of which little is known, but which included the invasion, domination and expulsion of the Hyksos ; then six pharaohs including Tuthmosis II and Hatshepsut) of the XVIIIth dynasty (1580-1446 B.C.), who reigned altogether about 133 years ; then about one year of the reign of Amenophis II, making altogether the 430 years of the sojourn.

As some confirmation of the suggested date of the exodus, namely, about 1446 B.C., there is the date of the fall of Jericho. The Bible states that this occurred about forty years after the exodus (Exod. xvi, 35 ; Num. xiv, 33, 34 ; Deut. i, 3 ; ii, 7, 14; Joshua v, 6 ; Psalm xcv, 10 ; Hebrews iii, 17). According to Professor Garstang, who excavated at Jericho for several years, (a) " the city was destroyed, in round figures, about 1400

B.C." ; (b) " the normal life of Bronze Age Jericho was brought abruptly to an end during the reign of Amenophis (or Amenhetep) III, who reigned approximately from 1411 to 1375 B.C." ; (c) " between 1400 B.C. and the accession of Akhenaton."[1] Adding forty years to these dates to allow for the interval between the exodus and the fall of Jericho, the date of the exodus would be between 1440 B.C. and 1415 B.C., which is a close approximation to the 1446 B.C. already deduced from other considerations.

Père Vincent, a well known Palestine archæologist, whose opinion cannot lightly be disregarded, states that the fall of Jericho took place about 1250–1200 B.C.[2] Professor Albright, another eminent Palestine archæologist, who disagrees with this, states that Père Vincent " is therefore not at all justified in appealing to his examination of sherds during the excavations of Sellin and Watzinger (1908–1910) in support of a date in the late thirteenth century for the latest pre-Israelite remains of Jericho . . . " and that he (Albright) " would be only too happy to join Père Vincent in his low dating of the latest L.B. material at Jericho if there were any concrete evidence for it."[3] Albright's date for the fall of Jericho is between 1375 and 1300 B.C.

Since neither Vincent nor Albright are Egyptologists, while both Garstang and Rowe are, and since much of the crucial evidence for the dating of the last pre-Israelite occupation of the city consists of Egyptian material, I accept the dating of Garstang and Rowe, namely, about 1400 B.C. One piece of evidence is that out of a total of eighty-one Egyptian scarabs, scaraboids, seals and amulets found at Jericho and

[1] J. Garstang, (a) Jericho, in *Palestine Exploration Fund Quarterly Statement*, 62 (1930), pp. 123–132 ; The Chronology of Jericho, *op. cit.* 63 (1931), pp. 105–107 ; (b) The Fall of Bronze Age Jericho, *op. cit.* 67 (1935), pp. 61–68 ; (c) J. Garstang and Alan Rowe, *op. cit.* 68 (1936), pp. 170 and *The Times of* 21st April, 1936.

[2] Père L. E. Vincent, (a) La chronologie des ruines de Jericho, in *Revue Biblique*, 39, (1930), pp. 404–433 ; (b) Céramique et chronologie, *op. cit.*, 41 (1932), pp. 264–276 ; (c) Jericho et sa chronologie, *op. cit.* 44, (1935), pp. 583–605 ; (d) The Chronology of Jericho in *Palestine Exploration Fund Quarterly Statement*, 63 (1931), pp. 104–105.

[3] W. F. Albright, *Bulletin American Schools of Oriental Research*, 74 (1939), pp.18–19, n. 27.

now in the Jerusalem Museum, only two are of a date later than the xviiith dynasty (1580–1350 B.C.).[1]

Another piece of evidence in favour of a date about 1446 B.C. for the exodus is provided by the Meneptah stela. Meneptah reigned from about 1225 B.C. to about 1215 B.C., and the stela records that during the early part of his short reign he defeated the Israelites (" Israel is destroyed, its seed is not "). There are only two periods of the exodus when this could have happened, either during the abortive attempt of the Israelites to enter Canaan from the south between two and three years after they had left Egypt, or else during the conquest of Canaan from the north-east after the fall of Jericho. Wiener[2] and Griffiths[3] support the former view, but there is no evidence whatever that the defeat referred to in the Bible (Num. xiv, 44, 45 ; Deut. i, 44) was by the Egyptians, or that the Egyptians were in any manner connected with, or responsible for, it, and the Bible states explicitely that it was by the Amalekites, the Canaanites and the Amorites from the mountainous district adjacent to Kadesh, the occasion being a raid from Kadesh into Canaan by a portion only of the Israelites (" the ark of the Covenant of the Lord, and Moses, departed not out of the camp"). Where the defeat by Meneptah took place is not stated, but there is no evidence that it was near Kadesh, the places named on the stela, as having been conquered, all being considerable distances away, namely, Ashkelon, which is on the coast about eighty-five miles north of Kadesh ; Gezer, which is nearly thirty miles to the north-east of Ashkelon, and Yenoam, which is on the southern slope of Lebanon[4], and the defeat of the stela may well have been south-east of Gezer, somewhere in the territory in which the tribe of Judah eventually settled, and, since the date was about 1220 B.C., or some 180 years after the suggested date for the

[1] Alan Rowe, Schedule 64, Totals of Scarabs, Scaraboids, Seals and Amulets Classified According to Sites, in *A Catalogue of Egyptian Scarabs*, 1936.

[2] H. M. Weiner, (a) *Posthumous Essays*, pp. 42–43 ; (b) The Historical Character of the Exodus, in *Ancient Egypt*, 1926, pp. 107–112.

[3] J. S. F. Griffiths, *The Exodus in the Light of Archaeology*, pp. 49–53.

[4] J. H. Breasted, *A History of Egypt*, 1924, pp. 293, 410, 465. See also Alan Rowe, *A Catalogue of Egyptian Scarabs*, 1936, p. XXX, n.1.

fall of Jericho, this fits in very well with the gradual conquest of Canaan by the Israelites, which was not completed until the time of David, about 200 years later than the date of the stela, and that during this conquest the Israelites should have suffered a setback, even a serious one, is not improbable, though they certainly were not annihilated, as stated on the stela, and their defeat did not prevent them from eventually occupying Canaan.

So far as is known there is no account in the Egyptian records of any other Egyptian victory over the Israelites during the exodus and conquest periods, or even of any encounter with them, and this one instance is not referred to in the Bible, where there is no mention of the Egyptians during the long years of the conquest.

It is sometimes stated[1] that the Egyptian rule in Canaan was so strong that no such invasion and conquest as is described in the Biblical books of Joshua and Judges, which are historical facts could have taken place until towards the end of the reign of Ramesses III, which lasted from 1198 B.C. to 1167 B.C. This, however, is not the case. If it is accepted that the exodus took place about 1446 B.C. and the fall of Jericho about 1400 B.C., then the conquest of Canaan did not begin until after 1400 B.C. During the greater part of the previous forty years the Israelites were living a peaceful pastoral life in the district round Kadesh, away from all towns and some fifty miles from the coast, Kadesh being situated about sixty miles south of Gaza, and it was not until after the fall of Jericho that they could have been in serious conflict with Egyptian interests. The period immediately following 1400 B.C. was during the second half of the reign of Amenophis III, who reigned from about 1411 B.C. to about 1375 B.C., when " the high tide of Egyptian power was already slowly on the ebb and he was not the man to stem the tide."[2] Although the Egyptian suzerainty still extended nominally over Canaan (Palestine-Syria) the El Amarna letters, the bulk of which date from the middle of the reign of Amenophis III to the end of the reign of Akhenaten, show that during the latter part of the reign of Amenophis III

[1] W. M. F. Petrie, *Palestine and Israel*, p. 55 ; H. R. Hall, *Journal of Egyptian Archaeology*, 13, (1927), p. 5.

[2] J. H. Breasted, *A History of Egypt*, 1924, p. 329.

there was serious trouble, caused by inroads of the Hittites and people of Ameurru in the north, and of the Habiru in the south.[1] This trouble increased during the next reign, that of Akhenaten (1375–1358 B.C.), in the course of which Egypt's hold on her Asiatic possessions became little more than a name. After Akhenaten, there were the three short reigns of Smenkhkara, Tutankhamun and Ay respectively, during none of which was there any Egyptian campaign in Asia. Then Horemheb (1350–1315 B.C.) ascended the throne, of whom Breasted says[2] " A list of names of foreign countries on the wall . . . contains the conventional enumeration of conquests abroad, which are probably not to be taken very seriously ; the name of the Hittites appears among them, but later conditions show that he could have accomplished no effective retrenchment of their power in Syria." The following king Ramesses I, only reigned about two years (1315–1314 B.C.) and " was too old to accomplish anything."[3] Next came Seti I (1313–1292 B.C.) who, in the early part of his reign, conducted two campaigns in Asia.[4] In the first of these, Seti marched his army along the old military road from Egypt through northern Sinai and southern Canaan, where he had skirmishes with certain bedouin (the Shasu) ; then north, where he captured Yenoam and where the chiefs of Lebanon submitted to him. In the second campaign he fought against the Hittites, and in one of the campaigns (which of the two is not clear) he captured Beth-Shan (the modern Beisan), about fifteen miles south of the Sea of Galilee, which he re-fortified and where he erected a temple two stelae[5] and crossed the Jordan and erected a further stela in what is now northern Transjordan. With reference to these campaigns Jack says[6] " there is no trace in his campaigns of any occupation of central or southern

[1] S. A. B. Mercer, *The Tell El-Amarna Tablets*, 1939.

[2] J. H. Breasted, *op. cit.* p. 407.

[3] J. H. Breasted, *op. cit* p. 408.

[4] J H. Breasted, *op. cit.* pp. 410–413 ; *Ancient Records of Egypt*, III, pp. 39–50.

[5] Alan Rowe, (a) *The Topography and History of Beth-Shan*, 1930, pp. 24–30 ; (b) *A Catalogue of Egyptian Scarabs*, 1936, pp. 29–30. Also C. S. Fisher, Bethshean, in *The Museum Journal, Philadelphia*, 1923, pp. 229–232.

[6] J. W. Jack, *The Date of the Exodus*, p. 62.

Palestine, which would be the territory in which the Hebrews of the Exodus were settled at this particular time."

After the death of Seti I, his son Ramesses II (1292–1225 B.C.) ascended the throne. He waged a long and bitter war, lasting about fifteen to twenty years, in Canaan, chiefly against the Hittites ; he is stated to have quelled a revolt in the south, besieged and taken Ashkelon, captured at least eighteen, and possibly twenty-four, towns west of the Sea of Galilee, the names of most of which have been lost, and also to have regained control of what is now northern Transjordan.[1] He erected a stela at Beth-Shan and another in Transjordan.[2] in this connection it should not be forgotten that the Egyptian accounts of their exploits were engraved on stelae and on the walls of temples, not as historical documents, but in order to glorify the pharaohs concerned, as, for instance the various accounts of the battle of Kadesh, which are simply eulogies of Ramesses II. Jack states[3] that " practically all the places taken possession of were located either in the far north, including distant Syria, or in the Maritime Plain and Shephelah, which were not actual Hebrew territory at the time, or at least not continuously held by the Israelites till long afterwards."

On the death of Ramesses II his son Meneptah (1225–1215 B.C.), then about sixty years old, ascended the throne. During the early part of his reign he fought in Canaan and defeated the Israelites, as described on his Victory Stela.[4]

Summing up the whole matter, Jack says[5] " the military campaigns of Seti I, Ramesses II and Ramesses III must have left the Israelites practically untouched in the narrow highland territory which they occupied at first. They had found it easy . . . to enter the land during the later years of Amenhotep III, when the Egyptian weakness and incapacity first manifested

[1] J. H. Breasted, *A History of Egypt*, pp. 423–441 ; *Ancient Records of Egypt*, III, pp. 123–165.

[2] Alan Rowe, *The Topography and History of Beth-Shan*, pp. 31–36 ; *A Catalogue of Egyptian Scarabs*, pp. XXX–XXXII.

[3] J. W. Jack, *op. cit.* p. 65.

[4] J. H. Breasted, *A History of Egypt*, pp. 465–466 ; *Ancient Records of Egypt*, III, pp. 256–259 ; 263–264.

[5] J. W. Jack, *op. cit.* p. 76.

itself, and when widespread invasion from all sides was taking place. They were able to continue without molestation from outside during three-quarters of a century of Egyptian inaction and pacificism. . . . They had just as little difficulty also, as far as Egyptian power affected them, in remaining in possession during the later military campaigns of the Pharaohs, for there is no conclusive evidence that the part of the land mainly occupied by them at the time (central and southern Palestine) was ever retaken and held again by Egyptian governors as a dependent tributary province."

With respect to the much disputed question of the identity of the Habiru and whether they were the Hebrews from Egypt, the latest evidence available still leaves this unsettled.[1] Might it not be, however, that since both Hebrews and Habiru were invading Canaan at the same time, and because of the similarity of the name, that some of the events attributed in the El Amarna letters to the Habiru were due to the Hebrews (Israelites) from Egypt. This would account reasonably for the fact that otherwise the letters make no mention of the Israelites.

Another and very widely held opinion of the date of the exodus, though one that is now losing ground, is that it was some 226 years after the date suggested, namely, about 1220 B.C. during the reign of Meneptah, which would make his predecessor, Ramesses II, the pharaoh of the oppression.

In support of this later date it is pointed out that the Israelites " built for Pharaoh store cities, Pithom and Raamses (Exod. i, 11), and, again " the children of Israel journeyed from Rameses to Succoth " (Exod. xii, 37 ; Num. xxxiii, 3, 5). The explanation I offer is that although the names Raamses and Rameses were used, this is not proof that these were the original names of the places. It is not unusual for a place that has changed its name to be called by the later name even when mentioned in connection with the earler period, the narrator general making use of the name current in his own day. Thus it is stated that Abram pursued those who had taken his nephew Lot prisoner as far as Dan (Gen. xiv, 14), though the

[1] F. H. Hallock. The Habiru and Sa-Gaz, in *The Tell El-Amarna Tablets* (S. A. B. Mercer), 1939, pp. 838–845. H. H. Rowley, Ras Shamra and the Habiru Question, *Palestine Exploration Quarterly*, 1940, pp. 90–94. J. W. Jack, New Light on the Habiru-Hebrew Question, *Palestine Exploration Quarterly*, 1940, pp. 95–115.

name " Dan " was only given to the city later. Also, the district where the Israelites settled in Egypt is called " the land of Goshen in one place (Gen. xlvii, 6) and " the land of Rameses " in another place (Gen. xlvii, 11), but no one suggests that the entry of Jacob and his family into Egypt took place during the Ramesside period, that is between 1315 B.C. and 1090 B.C.

Again, if the exodus occurred about 1220 B.C., and if the Biblical period of 430 years for the sojourn is accepted, then the entry into Egypt must have taken place about 1650 B.C., which was during the Hyksos period. But the entry of the Israelites in no way corresponded to that of the Hyksos, who were armed invaders, whereas Jacob and his family were peaceful shepherds and invited and honoured guests and only seventy in number, far too few to have constituted a danger to Egypt. Also, that Joseph was not in the Court of a Hyksos king, but at that of an Egyptian pharaoh, is abundantly proved from the narrative in the Book Exodus. Thus, Potiphar " an officer of Pharaoh's, the captain of the guard " not only bore an Egyptian name, but is stated definitely to have been an Egyptian (Gen. xxxvii, 36 ; xxxix, 1), which would have been most improbable at the Court of a Hyksos king. Again, Joseph was set over " all the land of Egypt " (Gen. xli, 41, 43, 44, 46), which could not have happened during the Hyksos domination, particularly towards the beginning of it, since, although ultimately the Hyksos laid the whole of Egypt under tribute, this was not until long after the invasion, and they never ruled in Upper Egypt. Further, the name given to Joseph, Zaphenath-paneah (Gen. xli, 45) by the pharaoh is an Egyptian name, which would have been most unlikely unless the pharaoh had been Egyptian. And, as a special distinction, Joseph was given as wife the daughter of a priest of On (Heliopolis), the daughter's name, Asenath, and her father's name, Potiphera, both being Egyptian (Gen. xli, 45), which would have been most improbable under a Hyksos king, since, although the Hyksos became Egyptianized later, and one of them rebuilt the temple at Bubastis,[1] at first they did not worship the Egyptian gods, but destroyed the temples. Thus,

[1] W. M. F. Petrie, *A History of Egypt*, I (1923), p. 257.

in an inscription at Beni Hasan Queen Hatshepsut states[1] " I have re-established that which was in ruins, I have raised up that which was previously destroyed, when the Asiatics were in the midst of Avaris in the Delta, overthrowing that which had been made, while they ruled in ignorance of Ra."

The names Potiphar, Zaphenath-paneah, Potiphera and Asenath were " unknown before the XXIst dynasty and did not become frequent until the XXIInd dynasty,"[2] from which it is often inferred, either that the whole story of Joseph is very late, or that it was not committed to writing until late. This, however, does not necessarily follow, since it is never safe to argue from a negative, and these names may still be found from a much earlier period.

Another small indication that Joseph was not at the Court of a Hyksos king, but at that of an Egyptian pharaoh, is the statement that " the Egyptians might not eat bread with the Hebrews " (Gen. xliii, 32) and they refrain from doing so, but no such rule would have applied between the Hyksos and the Israelites, both of whom were Semites.

[1] T. E. Peet, *Egypt and the Old Testament*, p. 70.

[2] Alan Rowe, Ancient Egyptian Relations with the Promised Land, in *The Egyptian Sunday Mail*, April 14th, 1940. A Hamada, Stela of Putiphar, in *Annales du Service*, XXXIX (1939), pp. 273–277.

THE RAINFALL OF PALESTINE

By C. F. Arden-Close

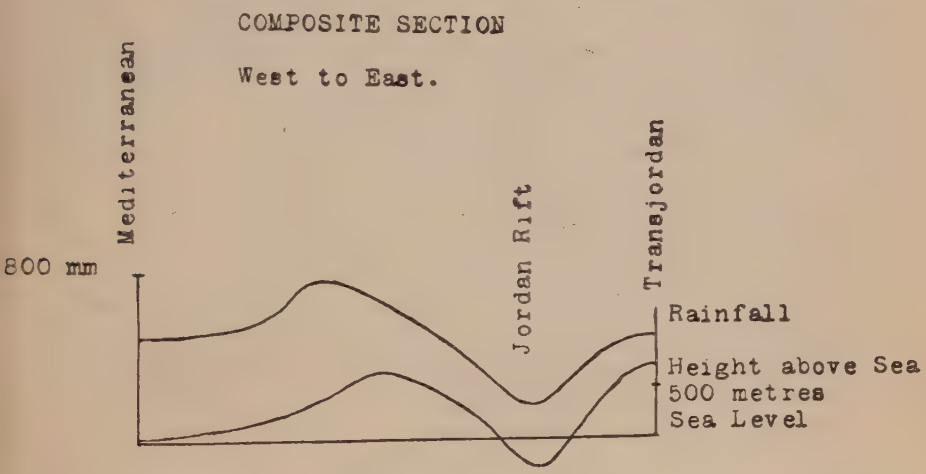
The publication, by the Hebrew University, of an interesting rainfall map of Palestine, Transjordan and Southern Syria, affords an opportunity for a review of the whole problem of the rainfall of Palestine, well-illustrated as it is by this excellent map, which is due to the labours of Dr. D. Ashbel, whose previous studies of the climate of Palestine are well known and valued.

To begin with, we are all familiar with the references in the Old Testament to the rainfall of the Holy Land. Thus, Deuteronomy xi, 14, " I will give you the rain of your land in his due season, the first rain and the latter rain, that thou mayest gather in thy corn, and thy wine, and thine oil." Jeremiah v, 24, " Let us now fear the Lord our God, that giveth rain, both the former and the latter, in his season." Joel ii, 23, " Rejoice in the Lord your God : for he hath given you the former rain moderately, and he will cause to come down for you the rain, the former rain, and the latter rain in the first month." To the dweller in Western Europe these sentences would be apt to convey the impression that there were two periods of rain, separated by a rainless interval. But, if we consult rainfall statistics, such as those published by Glaisher, in 1902, for the Fund, or the pamphlet *Das Klima Palestinas* (Die Niederschlagsverhältnisse), published by Dr. Ashbel in 1930, we shall find that there are not two periods of rain, but only one. Dr. Ashbel gives the following mean monthly values (converted into inches) for the rainfall at Jerusalem ; the second row of figures is taken from Kendrew's *Climates of the Continents :*

Oct.	Nov.	Dec.	Jan.	Feb.	March
0.5	2.5	5.7	6.3	5.7	3.7
.. 0.4	2.5	5.7	6.3	4.6	3.5
.. Apr.	May	June	July	Aug.	Sept.
1.5	0.2	0	0	0	0
1.5	0.3	0	0	0	0

The total of the first list is 26.1 inches, and of the second 24.8. We may say that the average annual rainfall of Jerusalem is about 25 inches.

It will be seen that the series is very regular, beginning in October with about half an inch, reaching a maximum in January with over six inches, and declining to May which has, on an average, about one-quarter of an inch. No rain is usually recorded for June, July, August or September. This



rainfall series can be put into a simple mathematical form; but this is not likely to be of any practical value.

A marked feature of the Palestine rainfall is its extreme variability from year to year, except that rain does not fall during the four months June to September. Thus, for Jerusalem, Dr. Ashbel records a maximum fall in one year of 1,015 millimetres, or 40 inches, and a minimum fall of 311 millimetres, or 12 inches. As it happens, the mean of these two values is about the average over a long period. But it is not only Jerusalem that suffers from these violent variations. The yearly fall at Jaffa has varied from 39 to 12 inches; at Haifa from 45 to 16 inches; at Nazareth from 55 to 15 inches; and so on. As bearing on this point it may be noted that, long ago, Conder remarked that years of drought have occurred at intervals from the earliest times, as can be seen from the

accounts of the lives of Abraham, Jacob and Ahab. But the yearly variations are not entirely capricious, for if a graph is drawn of the 5-yearly means from 1861 to 1920, for instance, it will be seen that there is a zig-zag rise to a maximum about 1893, followed by a zig-zag fall. But it would need a couple of centuries to determine the existence of any periodic change, if there is one.

The rainfall not only suffers from great variability from year to year, but there may be marked variations, due chiefly to height and aspect, in the same neighbourhood. Of the six rain-measuring stations at Jerusalem, existing in the year 1901-2, station I registered 512 mm. and station III 640 mm.; and in 1919–20 the greatest difference was recorded, namely 1,116 mm. for station III and only 712 mm. for station IV. Dr. Ashbel has remarked that the inner stations in the City are more strongly subjected to the influence of warm convection currents and that, presumably, the greater dust-content of the city air plays no small part in local condensation. The moral of all this is that too much reliance should not be placed upon the records of any one station, and that in the selection of stations, height and aspect and local conditions should be carefully considered.

With regard to exceptionally heavy rain-storms, it is recorded that on 2nd December, 1904, 4 inches of rain fell at Jerusalem; and on 9th December, 1921, nearly 11 inches fell at Haifa. But this sort of thing might happen anywhere. There is, for example, the record of a single day's rain at Bruton, in Somerset, amounting to 10 inches; and I have myself been at a place at the foot of the Himalayas when more than 17 inches fell in one day. And the world's record is to be found at Cherra-punji, in Assam, where, it is said, it sometimes rains at the rate of an inch an hour for days in succession!

And now for the interpretation of the terms *former* and *latter* rain. In Conder's well-known work, *Tent Work in Palestine*, Vol. II, p. 257, we find, "The first agricultural operation is that of ploughing, which is commenced in autumn at the time of the first rains, and again continued in spring for the later crops. The first period is about the end of November, the second in March and April."

Sir George Adam Smith, in *The Historical Geography of*

the Holy Land, p. 64 (1894 edition), puts the matter very clearly, thus: "Towards the end of October heavy rains begin to fall, at intervals of a day or several days at a time. These are what the English Bible calls the *early* or *former* rain, literally the *pourer*. It opens the agricultural year; the soil hardened and cracked by the long summer, is loosened and the farmer begins ploughing. . . . The *latter* rains of Scripture are the heavy showers of March and April. Coming as they do before the harvest and the long summer drought, they are of far more importance to the country than all the rains of the winter months, and that is why these are passed over in Scripture. . . . This has given most people the idea that there are only two intervals of rain in the Syrian year . . . but the whole of the winter is the rainy season."

Professor Macalister, in *Hasting's Dictionary of the Bible*, has the following: "As a rule the first rainfalls, which are accompanied by heavy thunderstorms, are followed by comparatively fine weather, broken by occasional wet days, after which, towards the end of the rainy season there are again heavy successions of rain-storms. The agricultural value of this division is obvious, and is recognised by the expressions *former* and *latter* rains. . . . The first rains soften the iron-bound soil, baked hard, so to speak, by the summer heat, and so make it fit for ploughing; the comparatively fine intervals give the husbandman time to sow, and the second showers water the seed."

Ellsworth Huntington, in *Palestine and Its Transformation*, 1911, p. 35, remarks, "The *former* and the *latter* rains of the Bible, as is well known, do not refer to separate seasons of precipitation, but merely to the first heavy down-pours in November and December, and to the last good rains in March or April."

Dr. Ashbel notes that it often happens, especially in the north of the country, that the rain, once begun, continues for a long time, and that the desired interval for farming does not arrive, so that the sowing may be delayed until the middle of winter. New settlers sometimes try to diminish this evil as much as possible by preparing the ground in summer, ploughing the fields directly after the reaping, so that the sowing can take place in October before the coming of the rain.

Mr. J. W. Crowfoot writes, " Delay in the early (November) rain postpones the sowing of seed, shortens the period available for growth and injures the quality of the harvest. Failure of the late (spring) rain is specially injurious to wheat."

Perhaps enough has been said about the *former* and the *latter* rain. And now for a more general view of the rainfall over Palestine and the near-by countries. The picture of the average annual rainfall is shown very clearly on the Rainfall Map, constructed by Dr. D. Ashbel and published, in 1940, by the Hebrew University Press. This map is based upon the statistics available for the period 1859–1938. It is immediately evident, from a glance at the map, how closely the average annual rainfall follows the relief of the country. The greatest fall, of 1,700 millimetres, or 66 inches, is recorded over the high mountain range of the Lebanon with its summits rising to some 7,000 feet above the sea in the area depicted. Coming further south, the central mountain ridge of Palestine reaches a height of 3,000 feet, a few miles north of Ramallah, and here we find a rainfall of more than 32 inches. Further south still, at Hebron, at about the same height, the fall is 24 inches ; but here we are approaching the southern desert.

An important feature is the deficiency of rain over the Jordan Valley and the Dead Sea. The little rainfall that there is along this rift decreases steadily, from north to south, from Lake Hula with 20 inches, through the Sea of Galilee with slightly less, to Jericho with an average of 4 inches, and the southern end of the Dead Sea with only 2 inches.

Carmel has 36 inches and the coastal belt from Haifa to a point south of Jaffa, between 24 inches and 20 inches. The hills of Transjordan have a rainfall which decreases from north to south, varying from 30 inches at Ibbin to 16 inches at Kerak.

Apart from local conditions, chiefly of aspect, the rainfall depends mainly on three factors ; height above the sea, proximity to the Mediterranean, and distance from the semi-desert and desert of the south. As to the Negev, Dr. Ashbel gives a map of the isohyets in this region, showing 200 millimetres (8 inches), at Beersheba, declining to 25 millimetres (1 inch), at Themed and Aqaba.

Any section based on this map, taken generally from west to east, shows very clearly the influence of the two factors,

height and nearness to the Mediterranean. I have made four such sections, Athlit to Irbid, Jaffa to Ibbin, Jaffa to Diban, and Gaza to Diban in which these characteristics are very evident. A composite section, resulting from the mean of these four, with the centre of the Jordan rift superimposed in each case, gives a graphical illustration of the effect of these two factors.

The physical cause of the winter rains in Palestine is of a simple character. The prevalent westerly winds, sweeping over the Mediterranean, are full of moisture, and meet the mountains of the Lebanon and the central hilly ridge of Palestine, and are forced to ascend. In rising, the air expands and is obliged to part with some of its content of water in the form of rain. Once over the mountains the air current descends and condenses, and, moreover, the Jordan valley and the Dead Sea are warmer than the rest of the country, so that little precipitation occurs, until, further to the east, the hills of Transjordan again cause the air to ascend and to part with much of what remains of moisture. As we go further south we get away from the influence of the Mediterranean, and even the hilly region about Petra has only some four inches of rain, on an average, each year.

There remains to be mentioned that interesting speculation as to the supposed change for the worse in the rainfall of Palestine since Biblical times. On this subject there are available several well-known and authoritative works in English, such as, Conder's *Tent Work in Palestine*, 1878 ; Sir George Adam Smith's *Historical Geography of the Holy Land*, 1894 ; and the same author's *Jerusalem from the Earliest Times*, 1907 ; and Ellsworth Huntington's *Palestine and Its Transformation*, 1911.

Conder devoted the last chapter of his book to a study of this question. His view was that " the change in productiveness which has really occurred in Palestine is due to decay of cultivation, to decrease of population, and to bad government. It is man, and not Nature, who has ruined the good land in which was " no lack," and it is therefore within the power of human industry, to restore the country to its old condition of agricultural prosperity." It must, of course, be remembered that this was written more than sixty years ago.

That high authority, Sir George Adam Smith, remarks, " Some authorities . . . have argued that, as in the Mediterranean basin as a whole, so throughout Palestine in particular, the climate has suffered a change for the worse, through the diminution of the rainfall. One of the reasons given for this conclusion is the alleged decrease of the woodlands of the country. I have shown . . . that in all probability these were never much greater on Western Palestine than they are to-day. . . . The references to climate and weather in the Bible and the Mishna are fully consistent with the present conditions."

In Ellsworth Huntington's book the last six chapters deal with this question. He quotes various authorities, who are about equally divided on the matter, but he adds that recent writers incline to the belief that no substantial change has taken place. This was written in 1911. But he, himself, gives many reasons for supposing that there has been a change of climate for the worse. He does not assume any radical alteration, but only that the rainy season " may have been somewhat longer and moister than at present," and he points out that Palestine does not lack an adequate total rainfall even to-day. His arguments are based upon five lines of evidence, namely, the density of population, the distribution of forests, ancient migrations and invasions, the location and water supply of ancient ruins, and the fluctuations of the surface level of the Dead Sea. In dealing with the last mentioned line of research he uses the observations and conclusions of Dr. Masterman, who remarked that it would appear that the surface level had varied nearly twenty feet within a century and that the terraces, or beaches, round the shores of the Dead Sea " may mark old sea-levels within historic times."

Huntington sums up thus : " From the seventh century before Christ to the seventh century after, each successive epoch of moist conditions seems to have been somewhat less pronounced than its predecessor," and he gives a diagram showing a gradual diminution of rainfall, with decreasing maxima occurring about every 300 years. An ingenious theory which our descendants and successors some hundreds of years hence may be able to test more effectively.

CORRESPONDENCE

THE NEGEV

Heythrop College,
Chipping Norton,
Oxon.
24th June, 1941.

DEAR SIR,

I have read with interest the account of the Negev in the current number of the PALESTINE EXPLORATION QUARTERLY. I regret that it does not hold out more hope of the development of the district. What a tragedy it is that so much fresh water should fall wasted into the Dead Sea, which is so much needed in the land adjoining! I have seen the birds hovering over the mouth of the Jordan, and was told they were there to feed upon the fish that floated dead to the surface, killed by the salt water. May it not be that the reclamation should proceed little by little, and that the only schemes seriously considered have been too grandiose? I have watched the shadoof working on the banks of the Nile, and have wondered whether something like this system might not by degrees transform much of the country about the north of the Dead Sea, helped out as it might be by the terrace-cultivation which I have seen practised, for example, at Bittir (Beth-her). And even a comparatively small pipe-line, driven ceaselessly by the water-power of the Jordan along the Dead Sea into the Araba, should serve by degrees to reclaim more and more of that unpromising wadi. One would like the time to come at long last when not a drop of fresh water would be wasted on the Dead Sea, at all events till the saline deposit had been removed (shall we say?) to Aqaba. But this is one of those grandiose hopes which, if taken too seriously, may hinder rather than help progress.

Yours faithfully,
C. LATTEY, S.J.

REVIEWS AND PUBLICATIONS

Department of Agriculture and Fisheries. Annual Report for the Year ended March 31st, 1940.

A reduction in the size of this annual report to but a shadow of its predecessors, four crown octavo pages, lessens still further whatever justification there may formerly have been for delay in its appearance. A Report for the year ending 31st March should surely be completed before 28th November and similarly there cannot be such pressure on composing staff in Jerusalem to cause a further six months to elapse before the Report is issued to the public. As a consequence of these delays the Report did not reach England until July when its contents were for the most part merely academic.

With only four pages available the information furnished is necessarily very meagre. And the story told is rather depressing, perhaps as a consequence of the inevitable compression.

"Owing to relatively poor returns to the grower, and with the disturbed conditions in the country, practically no further planting of citrus was undertaken during the year, while a fairly large area already under cultivation was wholly or partially neglected. . . . A further increase in the area under vegetables, poor yields from summer grain crops and legumes, and continued strides in the production of forage were reported. . . . The growing of deciduous fruits was depressed."

Even the Fisheries do not seem to have had all the success they might have gained. "A lack of credit facilities prevented development contemplated by newly formed groups of fishermen."

PALESTINE INDUSTRY[1]

PALESTINE has always had an adverse balance of trade. The highest was in 1935 when it rose to £13,337,336 (Imports £17,853,493 : Exports £4,516,157). In 1939, the last year

[1] *Statistical Abstract of Palestine*, 1940. Crown Agents for the Colonies, 5*s*. net.

for which complete figures are available and also a year in which Palestine was hardly touched by the war, the gap was £9,166,371 (Imports £14,632,822 : Exports £5,466,451). During the first eleven months of 1940 imports amounted to £10,271,695 and exports to £2,041,333. The gap has in the past been filled by money spent by tourists and other visitors ; by charitable, educational and similar expenditure, by Christians but to a far larger extent by Jews ; and by investments. An appreciable part of the last mentioned item, although not the whole of it, is in the form of capital brought by immigrants. Otherwise there are no invisible exports and although shares in the few Palestinian companies of any consequence are held abroad the sums exported in the form of dividends are small.

Imports into Palestine cover all three fields—raw material, food, and manufactured goods. The standard of living of the native population, Jewish as well as Arab, is Asiatic and to but a small extent dependent on imports. But the Jewish immigration of the past twenty years—comprising with the native Jews almost 30 per cent. of the total population—and the greatly increased European official population brought new needs and new luxuries. Their standard of living was different, higher than that of the native population, and to accept an inferior one is one of the heaviest impositions a man can suffer. On the other hand the example and influence of the new comers created new necessities among those already in the country. Thus among the existing population previous luxuries became necessities. New desires were aroused long in advance of the means of satisfying them in the normal manner. The result has been a sort of compromise. Conditions have deprived the new Jewish population of some of the amenities to which they had hitherto been accustomed. Thus the Jew from Central Europe is living or must live within a few months of his arrival on a lower level than hitherto. On the other hand the population of Palestine is still unable to pay for its reduced necessities.

In the past five or ten years the output of Palestine agriculture and industry has increased, but the population it has to support has increased at an equal if not a greater rate. There have also been some serious blows to the Palestine economy. The Tourist Traffic which in other circumstances might have

become one of the main supports of the country—there are all the conditions necessary to its development—faded away on the arrival of the economic depression in America in 1931. The American tourist had previously always been a source of wealth. According to Government statistics for some years past as much, if not more, money has been spent out of Palestine by Palestinians travelling as by visitors to the country. The export of citrus fruit, the great, relatively the only export of consequence, has year by year proved less and less remunerative. Of the total exports of £5,117,769 in 1939, £3,810,965 was represented by citrus fruits. In 1931 before overproduction began to have serious effect oranges and grapefruit brought in £949,527 out of a total income of £1,572,061. Shrewd observers foretold for years past the inevitable consequence of increasing production without proportionately increasing markets. In 1920–1 1,234,251 cases of oranges were exported, in 1938–9, 15,264,776 and in 1939–40 7,590,465. In the season 1940–1 extraneous circumstances prevented all export except an inappreciable amount, but three or four years ago already the industry had ceased to show a profit, in consequence of falling prices. In 1922 there were 29,000 dunams (7,500 acres) under cultivation for oranges. Year after year this area was increased, until over 300,000 dunams were devoted to citrus cultivation. But in 1937 the end came. In that year only 1,500 dunams were planted and since then there has been none. In 1934 alone 50,000 new dunams, more than twice the total acreage under citrus in 1922, were planted. As speculation increased the price of land rose, far above its proper value. Still worse, much of the land was bought with borrowed money. The inevitable happened. The Government came to the help of the industry first by reducing and foregoing taxation, later by the grant of loans which were later extended. But the Government's means are limited. It is already indebted to the British Treasury for half of its annual income. Moreover the state of the industry was one of more than passing indisposition. In the end a large area of citrus land has been abandoned. When, after the war, normal times are restored the output of citrus fruit will consequently be greatly reduced and the industry, so long as it is not again unduly expanded, can once again become remunerative. But the new

methods of cultivation will have to be more economical than the old.

Tourists and oranges were in the past the main supports of Palestine and both have failed, if only temporarily. Two other sources of a moderate prosperity have however appeared in the meantime and promise to extend and to prove permanent sources of wealth. Fortunately they cannot be abused. The one is the chemical industry of the Dead Sea whose output in 1939, all exported, amounted to £427,690. The second is a more recent development, the refining of mineral oil at Haifa. The raw material of this is all imported, but the refined product is for the most part sent abroad. The process materially benefits the Palestine economy and should do so to an ever greater extent in future.

The foregoing figures and deductions are taken from the *Statistical Abstract of Palestine*, 1940, which has just reached this country. But these figures unveil only a very small corner of this invaluable production. Equally useful and interesting information is given on a variety of other subjects relating to Palestine—vital statistics, migration, agriculture, transport, labour, finance, etc. To all serious students of Palestine and its problems this book like its predecessors is a necessity.

A. M. HYAMSON.

The Committee have to acknowledge with thanks the following :

American Journal of Archaeology, XLV, 1.
American Journal of Semitic Languages and Literatures, LVIII, 2.
Bulletin of the American Schools of Oriental Research, 81.
Bulletin of the Jewish Palestine Exploration Society, VII, 3 and 4, VIII, 1.
Expository Times, April-June, 1941.
Antiquaries Journal, April, 1941.
American Journal of hPilology, January, April and July, 1941.
Harvard Theological Review, January, 1941.
Religions, Aprilm 1941.
Transactions of the Victoria Institute, 1940.
Journal of the Society of Antiquaries of Ireland, March, 1941.

TRANSLITERATION OF HEBREW AND ARABIC CONSONANTS

HEBREW

Hebrew	English		Hebrew	English	
א	’		כ ך	kh	
ב	b		ל	l	
ב	bh		מ ם	m	
ג	g		נ ן	n	
ג	gh		ס	s	
ד	d		ע	‘	
ד	dh		פ ף	p	
ה	h		פ ף	f	
ו	v, w		צ ץ	ẓ	
ז	z		ק	k	
ח	ḥ		ר	r	
ט	ṭ		ש	sh	
י	y		ש	ṣ	
כ	k		ת	t	
			ת	th	

ARABIC

Arabic	English		Arabic	English	
ا	’		ض	ḍ	
ب	b		ط	ṭ	
ت	t		ظ	ẓ	
ث	th		ع	‘	
ج	g	or j in Syrian Arabic.	غ	gh	
ح	ḥ		ف	f	
خ	kh		ق	k	
د	d		ك	k	
ذ	dh		ل	l	
ر	r		م	m	
ز	z		ن	n	
س	s		ه	h	
ش	sh		و	w	
ص	ẓ		ي	y	

Long vowels marked thus :—ā, ē, ī, ō, ū

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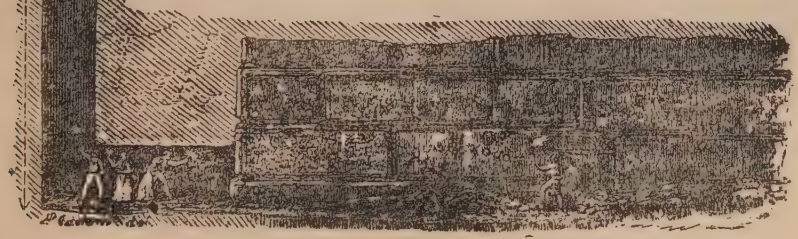

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CONTENTS

PAGE

NOTES AND NEWS 137

THE VERTICAL LOOM IN PALESTINE AND SYRIA:
BY GRACE M. CROWFOOT 141

THE DATE OF THE EXODUS:
BY H. H. ROWLEY 152

THE ORIGINS OF HEBREW LAW:
BY I. RAPAPORT 158

THE STORY OF JERICHO: FURTHER LIGHT ON THE BIBLICAL NARRATIVE .. ..
BY J. GARSTANG 168

CORRESPONDENCE 172

NOTICES OF PUBLICATIONS 174

LIST OF ILLUSTRATIONS

PAGE

THE VERTICAL LOOM IN PALESTINE AND SYRIA—
TEXT FIGURES:
FIG. 1. THE ROD HEDDLE .. 144
FIG. 2. THE WEAVERS TOOLS .. 145

PLATE XII: FIG. 1. WEAVER AND HIS BOY, SIDE VIEW .. .. .. *after* 151
FIG. 2. WARPING. HAMA (SYRIA), FRONT VIEW .. .. ,, ,,

PLATE XIII: WEAVER, HAMA (SYRIA):
FIG. 1. HEDDLE THREADS TAKEN FOR SHED .. .. .. ,, ,,
FIG. 2. SHED ROD. THREADS TAKEN FOR SHED .. ,, ,,

PLATE XIV: THE VERTICAL LOOMS—
FIG. 1. FOR THE NAMES OF PARTS SEE LIST ON P. 150 .. ,, ,,
FIG. 2. DIAGRAM OF THE METHOD OF WARPING. SEE P. 142 ,, ,,

PLATE XV: FIG. 1. WEAVER, NABLUS, BEATING UP WITH COMB BEATER ,, ,,
FIG. 2. THE COMB BEATER, NABLUS (PALESTINE) .. .. ,, ,,
FIG. 3. WOVEN SACKS IN CORN MARKET (BETHLEHEM) .. ,, ,,
FIG. 4. WEAVER AT AYASSO (MITYLENE) .. .. .. ,, ,,
FIG. 5. GIRLS SPINNING AT AYASSO (MITYLENE) .. .. ,, ,,

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS

THE PALESTINE EXPLORATION QUARTERLY. It is probable that the Executive Committee will shortly have under consideration the question whether the *Quarterly* should not, for the year 1942 and for the duration of the war be issued twice instead of four times a year. The suggestion is that the numbers for January and April should be combined under one cover and be issued in April, similarly the numbers for July and October would be combined and would be issued in October: if approved this course would effect an appreciable saving in the printing of cover matter, as well as in packing and postage.

THE PUBLICATION OF SAMARIA-SEBASTE, Vol. I. It had been hoped that this volume would appear during the year now drawing to a close, but, unfortunately, some of the original illustration material was destroyed by enemy action, and much delay inevitably occurred in replacing it. It is, however, expected that the volume will be published early in 1942.

The ever-recurring problem of the connection between the Habiru and the Hebrews which has been recently discussed in this Journal by Professor Rowley and Dr. Jack receives a fresh examination by Professor Kraeling in the July number of the AJSL. The inadequacy of the simple equation Habiru= Hebrews has long been recognised, but, as knowledge increases the problem becomes more complicated. What is new in Professor Kraeling's approach to the problem is his bold challenging of the usual assumption that the Habiru of the Tell el-Amarna Letters are " foreign invaders who are conquering the country after the manner of the Israelitic tribes of the Book of Joshua." He continues—" It seems to us far more

likely that we are concerned with social revolution within the land than with invasion from without." In this connection he quotes a recent remark of Lewy's to the effect that " no passage in the Amarna letters shows that they (the Habiru) are nomadic invaders." This view will no doubt receive the careful attention of scholars. Incidentally, it may be observed, this leaves the Eperu of Egyptian sources, hitherto connected with the Habiru and the Hebrews, in the air, so to speak.

Professor Kraeling goes on to examine the Old Testament occurrences of the term Hebrew and puts forward the interesting suggestion that the name is not an early foreign designation of the Israelites but was introduced in the ninth or eight centuries by Israelite writers as a self-designation arising out of a new national consciousness. The thesis is interesting and suggestive and should provoke valuable discussion.

In the current number of the *Harvard Theological Review* there is an interesting article by Mr. M. W. Bloomfield on the origin of the concept of the Seven Deadly Sins. The author collects the evidence which clearly points to the origin of this concept in a very ancient and wide-spread belief which has survived to the present day among certain primitive peoples. This is the belief in a journey taken by the soul after death, in the course of which it encounters various obstacles and enemies. The source of the belief probably lies in funerary ritual, such as we find in Egypt and elsewhere, intended to safeguard the soul on its way to its ultimate abode. The earliest appearance of this myth of the soul's journey is to be found in the Epic of Gilgamesh where we have a description of the hero's journey through many obstacles to the place where his ancestor Utnaphishtim enjoys the gift of immortality. This reference carries the origin of the concept back to a far earlier stage than the Persian origin suggested in the article. An interesting form of the myth occurs in allegorical form in the Syriac Hymn of the Soul, current in early Christian Gnostic circles.

In the Jewish Quarterly Review for April Dr. S. Zeitlin re-examines with much learning and sound judgment the

question of the Crucifixion of Jesus by the Jews, having in mind the present calamitous situation of that unhappy people. The following passage is worth quoting : " In a time like the present, when a new paganism is arising, whose aim is not only to destroy the Jews but ultimately to destroy Christianity as well, it is very important to examine anew the trial of Jesus and the crucifixion. The aim of modern pagans, like the aim of ancient pagans, is to effect the destruction of Christianity by the destruction of the Jews. Tacitus tells us the reason why Titus urged the burning of the Temple : ' It is said that Titus first called a council and deliberated whether he should destroy such a mighty temple . . . Titus himself . . . holding the destruction of this temple to be a prime necessity in order to wipe out more completely the religion of the Jews and the Christians ; for they urged that these religions, although hostile to each other, nevertheless sprang from the same sources ; the Christians had grown out of the Jews ; if the root were destroyed, the stalk would easily perish.' "

It is not always recognized that anti-Semitism is an indirect threat to Christianity.

Readers of this Journal will be interested in a valuable and well-informed article on the Druzes by a member of our Committee, Miss Estelle Blyth, in the July number of the *Asiatic Review*. Miss Blyth gives a vivid account of the rise, growth and vicissitudes of this strange sect, an account which is of special interest to-day in view of the strategic position of Syria in the world struggle. The article closes with the following words : " For the present, following the rising of 1925, the Druzes are a people broken and dispersed. It is impossible to forecast their future, but if the past of a people, proud, valiant, and conservative, is still to them the inspiration it has ever been, then we may predict revival and restoration in time. Their restless brains, their capacity for political intrigue and finesse, their sturdy self-reliance, make them an element to be reckoned with, both as an entity in Syria and beyond its confines as a factor in Near Eastern policy.

We regret to learn of the death on 3rd September of

Professor Archibald Campbell Dickie, M.A., A.R.I.B.A. who, before his appointment to Manchester University in 1912 was, in turn, field assistant in excavations at Jerusalem and Assistant Secretary of the Fund. An obituary will be published in our next issue.

News has also reached us of the loss to the cause of Palestinian archaeology sustained by the death, on July 20th, in Jerusalem of Dr. Clarence S. Fisher, Acting Director of the American School of Oriental Research.

THE VERTICAL LOOM IN PALESTINE AND SYRIA

By Grace M. Crowfoot

There are three chief types of loom in use at present in Palestine and Syria, the ground loom, vertical loom and treadle loom. The subject of this study, the vertical loom, is rarer than the other two types. A good account of it has been published by Dalman[1], but in many ways my notes are supplementary to his, and the loom is so interesting and so little known that it seems worth while to give this further notice of it here. Dalman found it in use in Palestine at Hebron, Nablus, Safad and district, and in Syria at Aleppo and Antioch, and I have studied it at Nablus and at Hama. He notes it as recorded from Greece and Turkey, and I have myself seen it in the Bazaar of the Coppersmiths at Athens, and at the mountain village of Ayasso on the Island of Mitylene. In all these cases the weavers were men.

The Loom (Pls. XII, XIII,[2] XIV, XV)

The vertical loom of Palestine and Syria has a frame consisting of two uprights and two warp beams, upper and lower, fastened together as shown in Pl. XIV, Fig. 1. In addition it has a third warp beam, Pl. XIV, Fig. 1.3, which is not fastened to the uprights but to a wall or posts behind the loom. Two projecting supports for the heddle rod are nailed to the uprights, Pl. XIV, Fig. 1.5. A cord is sometimes twisted at the top of the uprights to strengthen them and keep them the right distance apart, as in Pl. XIV, Fig. 2, sometimes the uprights are fastened to a cross beam, as in Pl. XIII.2. Neither of the two warp beams (upper and lower) can revolve and the lower is immoveable. The upper beam can be moved

[1] G. Dalman *Arbeit und Sitte in Palästina.* Vol. V., p. 107–112.

[2] The author gratefully acknowledges the two photographs of the weaving at Hama, kindly taken for her by Miss Bodil Hornemann of the Danish Expedition to Hama (Foundation Carlsberg).

up and down in the cleft of the upright by means of pegs (see especially Pl. XII.1).

The third beam is an interesting feature of this loom. It has two functions, one to control the tension of the warp, which is easily done by altering the ties by which it is fastened to supports behind the loom, the other to give the possibility of using a longer warp than that conditioned by the distance between the upper and lower warp beams ; the way in which this is done is explained in the section on Warping.

The looms are usually seen standing in workshops, leaning at a slant against the wall, with the lower ends of the uprights firmly embedded in the ground, as in Pl. XII, and sometimes they are set up in the front of the workshops, as in Pl. XIII, and then the upper ends of the uprights are lashed to the roof ; occasionally they are set up out of doors, tied to trees or other supports.

Warping. Pl. XII, and XIV. Fig. 2.

The third beam is used both for short and long warps, but the method of insertion varies. If the warp is short the third beam is not put into position till the warp has been laid round the upper and lower beams. This is well illustrated in Pl. XII.1, where two looms are standing side by side, the second concealed by the first. The warp has already been made on the second loom, and the third beam, holding the warp and tied to the wall, can be seen between the boy and the loom. The third beam of the first loom, where warping is going on, is lying on the ground beneath the feet of the boy. If a longer warp is required the third beam is tied in position before the warping begins, and the warp is laid round it as well as round the upper and lower warp beams. This was the case with the warp shown on (Pl. XIII.1,2,) which is carried right to the back of the shop. Longer warps than this are set up out of doors ; Dalman gives an instance, at Mejdel Krum in Galilee, where the third beam was 5m. away from the loom and the total length of the cloth produced was 11.50m.[1]

In all cases observed the method of warping was similar.

[1] G. Dalman *op. cit.*, Fig. 27.

It has been described by Dalman, but it is not easy to understand from a description alone, however clear, and I hope that the diagram on Pl, XIV. Fig. 2 will make the procedure more intelligible.

The warping is usually done by two people, the weaver and an assistant. In Pl. XII. 1,2, the weaver is seen in front of the loom laying the warp with his boy standing behind the loom to help him. The following is the method as observed at Hama:

The weaver began by placing the warping rod above the lower warp beam, lashing it on the left to the upright, while leaving the other end free as seen on Pl. XIV. Fig. 2,7. By his side was a large ball of thread, the end of which he tied to the warping rod. He then passed up a loop of the thread in front of the loom to the boy. The boy drew the loop over the upper beam and passed it down the back of the loom to the weaver who took it under the lower beam and slipped it on the warping rod. The weaver then slipped the thread round the warping rod and passed a second loop up the front of the loom to the boy as before. The direction of the passing of the loops is indicated by arrows on Pl. XIV. Fig. 2. This looping was repeated until the warp was complete, the ball of thread remaining on the ground throughout the process. The warp laid on the loom is continuous, in the sense that it goes all round the loom and can be moved round as required during the weaving and the warping rod is carried round with it.

In the case of the long warps described by Dalman, the boy had a hook with which he drew the loop, taking it over the upper beam and back to the weaver at the loom—the method was just the same as for the short warps, only the boy had further to travel. In Nablus, with short warps, the weaver often manages to lay them without an assistant. One morning I saw a weaver who put on a warp alone with incredible celerity, to the admiration of the whole workshop and myself and a gaping crowd outside. Such warping would make a star turn at any Craft Show.

The Heddle, text fig. 1.

The warp having been laid and the third beam being in position, heddle making is the next labour. In Hama the

crossing was taken from the warping rod by thrusting in the shed rod and the sword beater to hold the alternate threads, but at Nablus the crossing was actually made during the warping, between the warping rod and the shed rod held above it. In either case, the crossing having been made, the next step was the same. The shed rod was pushed up the loom, the heddle rod placed in position below it and lashed to the heddle supports. The continuous heddle was then made from a ball of coarse thread, passing it over the heddle rod and taking the threads from the sword beater. A little wooden measure was used to keep the loops even, slipping it along as required, and each heddle loop was twisted round a string tied along the rod as shown in Fig. 1.

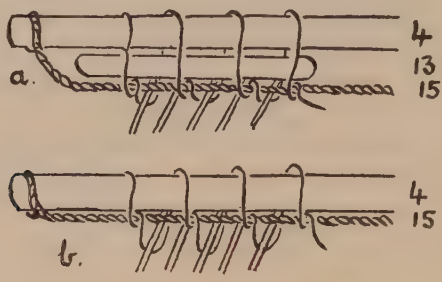


FIG. 1. THE ROD HEDDLE
a. WITH MEASURE IN POSITION.
b. WITH MEASURE REMOVED

The Weaver's Tools, text fig. 2.

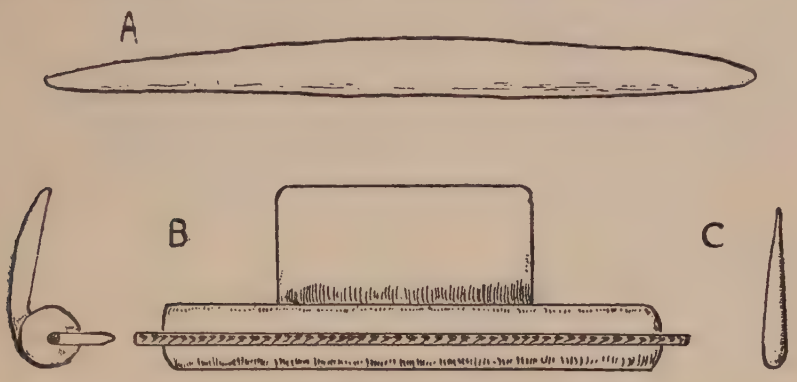
The tools used in weaving are the spool which carries the weft and three beaters-in, i.e. the sword, comb and pin.

The spool is merely a stick about three feet long, with the weft wound upon it ; it can be seen on the right side of the loom on Pl. XIII.1,2.

The sword beater, fig. 2A, a thin piece of wood, pointed at both ends, one more sharply than the other, is very like the sword beater used on the ground or Beduin loom.

The comb beater, fig. 2B, resembles the combs used on carpet looms in shape, but is very large and heavy. A specimen procured for the Bankfield Museum, Halifax (see Pl.

XV.2), measures 48 cm. x 14 cm., weighs eight pounds and has forty-seven teeth on the metal bar. The largest one seen had fifty-one teeth. The larger types are naturally the more ex-



THE WEAVER'S TOOLS
FIG. 2. A SWORD BEATER (9). B COMB BEATER (11). C PIN BEATER (12)

pensive and I was told that at Nablus the price rose at the rate of two and a half piastres for two teeth.

The pin beater, fig. 2 C, a pin made of wood polished and pointed, is used in Hama. Dalman records it for other places in Syria and mentions a more hook-shaped form in use at Hebron. The pin, straight or curved, is no doubt akin to the iron hook used by weavers on the ground loom in Palestinian villages and to the gazelle horn of the Beduin weavers.

Weaving

It must be remembered that the rod heddle is lashed firmly to the heddle supports and cannot be raised or lowered. The heddle threads are permanently raised to form a natural shed. To open this shed still further the sword beater is passed through it and turned on edge (see Pl. XIII.1), the spool is drawn through the shed and the weft beaten up. To obtain the countershed the shed rod is pressed close to the heddle rod (see Pl. XIII.2) to force the shed rod threads up between the heddle leashes, the sword is put through the small shed thus made

and turned on edge to improve it, and again spool and beater come into play. The sword beater is only used for a stroke or two to even up the warp, and the effective beating is done with the comb beater. This heavy implement is held with both hands as seen in Pl. XV.1; the picture of the man's hands on Pl. XV.2 also gives the right position, except that the comb is slightly tilted to show the metal teeth. The beating up with the comb beater is often sufficient to give the close weave desired, but if there is any unevenness the pin is used exactly in the same way as is the gazelle horn by Beduin women on the ground loom to pluck at individual threads till they lie close and even.

During the weaving the warp, which is continuous in the sense that it goes all round the loom, can be moved round as required and the warping rod is carried round with it. When the work is done, the heddle is removed, the warping rod pulled from the loops, and the web taken off the loom. The finished piece is then seen to have loops at both ends, like webs from the ground loom, and these could of course be cut to form handsome fringes for a rug or saddle bag, but in the cases observed the material was destined for sacks and the ends were therefore simply oversewn.

Products

The vertical loom is used principally for making coarse woollen goods, sacks, girths, rugs and tent cloths, but cotton cloths are sometimes woven as noted at Hama and Antioch. At Antioch, however, the loom is known as *nol sha'r* the " goat's hair loom " and there as elsewhere goat's hair is the chief material used. The thread made from it is often spun on hand spinning machines; those seen at Nablus were in such dark and inconvenient corners of the workshops that it was not possible to obtain a photograph of them, but similar machines are in use in Greece, and some of these, from Ayasso (Mitylene) are shown on Pl. XV.5.

At Nablus the only products of the loom observed during our stay in Samaria were strips of cloth in black or grey goat's hair with a simple decoration of stripes, plain or chequered, in black and white. The weave is warp face, the weft being

entirely concealed and the resulting material is very strong and durable ; it was used for sacks only but is quite attractive in texture and would make good rugs or stair carpets. In the picture of the corn market at Bethlehem shown on Pl. XV. 3, some sacks from Nablus are to be seen together with others made on the ground loom. The material is very much alike but can usually be distinguished because the women weavers on the ground loom use a finer handspun thread and are more lavish with their patterns.

Comparisons, Modern

This loom is identical with the vertical loom of modern Greece as described by Chatzi-Zogidis[1] and as observed by myself in Athens and at Ayasso (Pl. XV. 4). The manner of weaving and the tools used are similar ; the only difference that I noted was that the weaver was provided with a seat instead of sitting on the ground. I did not see the warping but judge from the all round warps seen and the presence of the warping rod that it may have been similar. The products again are very much the same, mostly woollen goods such as saddle-bags and sacks, as well as the girths, webbing and belts which have given it the name of the " belt loom."[2] At Athens I saw strips of grey goat's hair cloth with check stripes on the loom which exactly resembled those seen in Nablus.

In recent years Mr. H. V. Morton saw this loom in use at Tarsus for weaving tent cloth from the fine hair of the Cilician mountain goats.[3]

In Greece and Turkey as in Palestine and Syria, the loom is seen to possess certain primitive features in common with the ground loom, i.e., the fixed rod heddle, and the use of sword and pin to beat up with. The most interesting features in Palestine and Syria are the use of the third beam and the manner of warping ; these seem to be present at least in some cases in Greece but the evidence is incomplete.

[1] Ν. Χατξη-Ζωγίδου, Αεσσαλικα Ζητηματα, Αθηνα X. 1898. pp. 541-55.

[2] σχοινάτικος ἀργαλειός.

[3] H. V. Morton. *In the Steps of St. Paul*, pp. 63, 64.

Comparisons, Ancient

The earliest examples of vertical looms are those known from tomb-pictures of the XVIIIth–XIXth dynasties in Egypt.[1] The ancient Egyptian vertical loom had uprights and upper and lower warp beams, and probably a rod heddle and shed-stick but the paintings are not clear enough to be sure what device was used for lengthening the warp. This loom may have been known in Syria earlier still if, as has been suggested, it was introduced into Egypt from that country, but of this there is as yet no real evidence.

Later in time we find this vertical loom in Roman use at the beginning of the Christian era.[2] It may have come to Rome from the East through the Hellenistic world, or perhaps directly from Egypt. One may think of this loom as the gradual supplanter of the old Greek warp-weighted loom, the process may have begun in the Ptolemaic period, I fancy, and no doubt was not complete till much later, there is even a mention of it as late as the fourth century A.D.[3] The earliest illustration of the Roman vertical loom is a painting in a hypogeum at Rome of the second half of the second century A.D.[4] The scene is pastoral and represents no doubt the return of Ulysses to Ithaca. It is strange to see Penelope standing beside this alien loom instead of her own warp-weighted variety, as also to see Circe similarly placed in the Vatican MSS. of 400 A.D.[5] and still stranger to see Penelope seated at a fully developed treadle loom in the fifteenth century picture by Pinturicchio in the National Gallery ; in all these cases the painter naturally showed the loom most familiar in his day.

In Palestine the use of the vertical loom seems established for the period second century B.C.—second century A.D. by the

[1] Ling Roth. *Ancient Egyptian and Greek Looms.* Figs. 313, 14, 16. Johl. *Altaegyptische Webestühle.* Figs. 34, 35, 36, 39, p. 47 ff.

[2] There is good evidence that this was the loom of Ovid, see especially Lilian M. Wilson, *The Clothing of the Ancient Romans*, p. 22. It was also probably the "ὀρθιος ἱστος" of Artemidoros (*Oneiros*, 3.36), an author who lived about A.D. 160.

[3] Servius. *Ad Aen*, VII, 14.

[4] G. Bendinelli. *An Underground Tomb, etc. Art and Archaeology*, XI., 1921, pp. 169–172. Also L. M. Wilson, *op. cit.*, pl. X.

[5] See Smith, *Gr. and R Ant.*, p. 941.

evidence from the Mishnah. Dalman points out that the Jewish loom referred to there was upright (*omédin*) that it had an upper beam (*kabed eljon*) and a lower beam (*kabed tahton*) and that there is no mention of treadles. It had a heddle (*nirim*—Arabic *nir*) and though other details are uncertain the type seems clear.[1]

The vertical loom was undoubtedly in use in Palestine in the time of Christ. This fact supports the suggestion made by Mr. H. V. Morton that the loom he saw at Tarsus was the same kind of loom as that used by St. Paul. However he also suggests that the loom he saw was similar to that used by Penelope and speaks of it as warp-weighted, although his photograph shows that it had two warp beams. It was not the ancient Greek loom that he saw but the Roman one. Apart from this mistake his description holds good, and he gives a vivid picture of his discovery: "I walked down a side street in Tarsus where a number of humble little workshops are open to the gaze of any passer-by. In the darkness of these sheds men spin thread from goat's hair and weave it into coarse cloth.

This street of weavers is the only link with the Tarsus in which St. Paul was born, for I saw with a start of surprise and delight that these men were making tent cloth for the nomads of the Tarsus. . . . As I watched the weavers at work, I knew that I was watching something that St. Paul had seen. If he returned to Tarsus to-day, he would look in vain for the temples, the baths, the statues, the market place, even the river; but in these little workshops he would recognize the trade that had supported him in Thessalonica, Corinth and Ephesus."[2]

ARABIC WORDS USED IN WEAVING ON THE VERTICAL LOOM

Palestine and Syria

The numbers given to the parts of the loom are the same as those used on Plate XIV. 1, 2, and text figs. 1, 2.

[1] G. Dalman, *op. cit.*, p. 63.
[2] H. V. Morton, *op. cit.*, pp. 63, 64.

English	Arabic
1,1. Uprights	Fakhad ; pl. Afkhad
2,2. Upper and Lower Beams	Klikha
3. Third Beam	Ziyār
4. Rod Heddle	Kanun (Nir)
5. Support for Heddle Rod	Zind ; pl. znud
6. Shed Rod	Kābis (Nablus)
7. Warping Rod	Kadib es-sidu ; kadhib
8. Peg twisting cord above loom	Riah. (Nablus only)
9. Sword Beater	Sēf
10. Spool	Matrak el-lahme ; also kadib
11. Comb Beater	Musht
12. Pin Beater (wooden)	Ikhlāl ; ikhlēl
13. Heddle Measure (wooden)	Kasbat en-niri (Nablus) Qasbet (Hama)
14. Wedge	Sifin ; pl. asafin
15. String across heddle	Ridis
16. Crossing	Hadfi (Nablus only)
17. Temple	Mtit ; madēde ; madid (Nablus)

(Nos. 14, 16, 17 are not shown on illustrations).

NOTE ON THE ARABIC WORDS USED IN WEAVING ON THE VERTICAL LOOM

The words used for the parts of the loom seem very constant ; my notes agree with those given by Dalman, except for a few variants indicated in the list.

The most interesting use is that of the word *kanūn* for the rod heddle. This must be identical with the ancient Greek word κανων (lit. rule, order) known from Aristophanes as an object peculiar to women's work (Arist. *Thesm.* 829), from Homer's *Iliad* as part of the loom (II. 23,761) and generally considered to be the heddle rod.

The vertical loom weavers all know the usual Arabic word

for the heddle, *nir*, and those of Antioch use it instead of *kanūn* according to Dalman, but in the other cases observed the word *kanūn* was certainly used of the whole heddle. One man said to me, in explaining the loom : " This is the *kanūn*, *Kanūn en-nir*, but we say only, *kanūn*."

Some others of the names for the loom parts have simpler or more obvious meanings. The uprights are called *afkhad* "thighs", in the same way as the Greeks called the uprights of a vertical loom ἱστοποδες (whether in this case two-beamed or warp-weighted is not clear) lit. the " legs of the loom " just as we nowadays speak of the " legs " of a table or chair. The projecting heddle rod support has the name of *zind* " forearm " which is easily intelligible, and the third beam is called the *ziyar* " visit," perhaps because it comes and goes. The word for the warp beam, *klikha*, so far has not been explained. The rest are quite clear, *medid*, for the temple, is a very common word, meaning " spreader"; *mishṭ*, " comb " and *sef* " sword," also common; *ikhlel*, for pin is the word also used for a toothpick or borer. Words like *matraq* " spool " *kadib* " warp rod " have no specific meaning and are used for other kinds of sticks and rods as well.

THE DATE OF THE EXODUS

By H. H. Rowley

It has long been recognized that the evidence bearing on the question of the date of the Exodus is very complex, and that the synthesis of the Biblical and extra-Biblical material is by no means simple. In consequence several theories have been propounded, around which very considerable discussion has gathered. In recent years one of these theories has had a considerable revival, and not a few of its advocates have adopted the principle that the weakness of its basis can be atoned for by the assurance of its proclamation. Mr. Lucas's article in the July, 1941 issue of the Palestine Exploration Quarterly[1] is an excellent example of this.

In this article, Mr. Lucas reduces the problem to extreme simplicity by selecting what appears to be serviceable for his purpose, and ignoring all else. This is the method of propaganda rather than of scholarship, or the scientific search for truth.

(1) Mr. Lucas begins by observing that " in any consideration of the date of the exodus, manifestly the first step should be to ascertain what the Bible says about it." Instead of proceeding to do this, however, he selects one verse of the Bible, 1 Kings vi, 1, and ignores all other Biblical evidence on the question. Moreover, his initial mood of respect for the authority of Biblical statements disappears two pages below, when he sets aside the statements of Gen. xv. 13 and Acts vii, 6 on no more evidence than that in his opinion they are unlikely to be true!

The single item of Biblical evidence, to which Mr. Lucas appeals, is the statement that the Exodus took place four hundred and eighty years before the founding of the Temple.

[1] " The Date of the Exodus," pp. 110-121.

1.
WEAVER AND HIS BOY, SIDE VIEW

2.
WARPING. HAMA (SYRIA), FRONT VIEW

1

WEAVER, HAMA (SYRIA)

1. HEDDLE THREADS TAKEN FOR SHED 2. SHED ROD. THREADS TAKEN FOR SHED

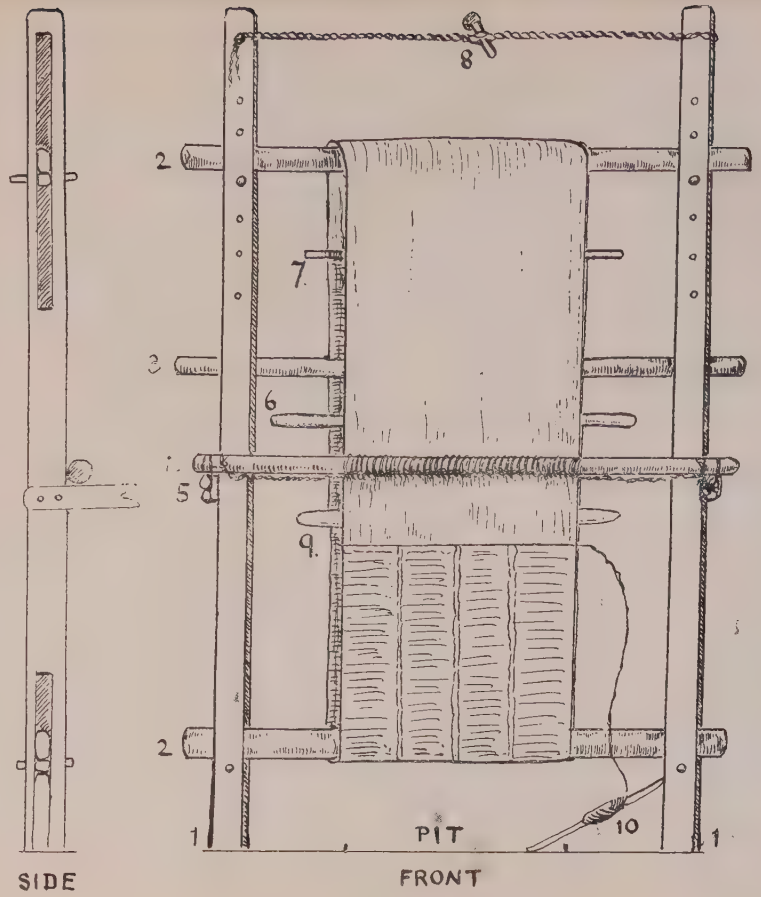


FIG. 1.

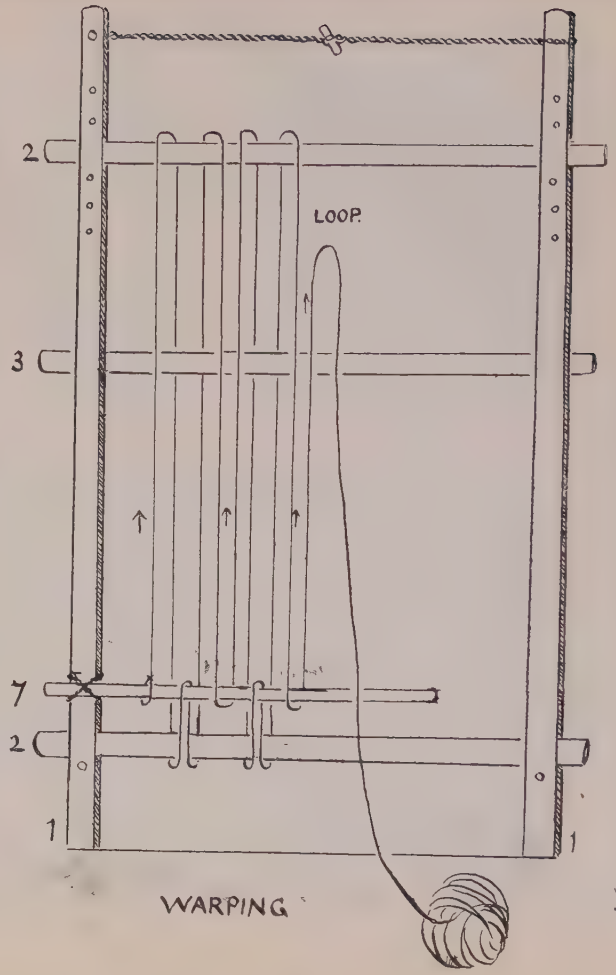


FIG. 2.

1. WEAVER, NABLUS, BEATING UP WITH COMB BEATER
2. THE COMB BEATER, NABLUS (PALESTINE)
3. WOVEN SACKS IN CORN MARKET (BETHLEHEM)
4. WEAVER AT AYASSO (MITYLENE)
5. GIRLS SPINNING AT AYASSO M'TYLENE)

This is a statement made by the author of the Books of Kings, who cannot have compiled his work until the eve of the Exile, at the earliest. The calculation of a date some eight hundred and fifty years before his time, without the aid of a fixed era, would be extremely difficult, and the many problems attaching to the other chronological statements of the Books of Kings make it quite impossible to accept his chronology without more ado. It is well-known, for instance, that by his figures the period from the Disruption to the Fall of Samaria varies widely in the kingdoms of Judah and Israel.

Against this single item of evidence there are a number of Biblical statements to be set, some of them embodied in the material of the traditions themselves, which lie behind the various books of the Bible, rather than belonging to their compilers' framework. Thus we are told that from Nahshon, who belonged to the period of the Exodus (Num. i, 7), to Solomon was six generations (Ruth iv, 20-22). This can hardly be considered adequate to cover a period of four hundred and eighty years. We are also told that the Settlement in Canaan took place in the Iron Age (Deut. iii, 11, Josh. vi, 19, 24, xvii, 16, 18, xxii, 8), whereas four hundred and eighty years before the founding of the Temple was back in the Bronze Age, by general agreement. Again, the Bible places the Wandering in the Wilderness after the Philistine settlement (Ex. xiii, 17, xxiii, 31, Josh. xiii, 2 f.), and therefore not four hundred and eighty years before the founding of the Temple. Further, the Bible tells us that the Pharaoh of the Oppression employed the Hebrews on his public buildings, and since they continued to dwell in the land of Goshen (Ex. viii, 22, ix, 26), these building enterprises must have been in this region. The exact location of the land of Goshen is uncertain, but it is generally agreed that it lay somewhere in the Nile Delta region. It is also clearly implied in the narratives of Exodus that the Pharaoh had his royal residence in the neighbourhood of the land of Goshen at the time of Moses' interviews with him. The Biblical narratives, therefore, locate the oppression in the reign of a Pharaoh who undertook building operations in the Nile Delta, and who had a royal residence there. But if the Exodus took place four hundred and eighty years before

the founding of the Temple, the Pharaoh of the Oppression would have been Thutmose III, surviving traces of whose building activities are all located in Upper Egypt, and of whose residence in the Delta region nothing is known. The Biblical evidence is not therefore quite so simple as Mr. Lucas would appear to suggest, and his " first step " to ascertain what the Bible says is but half-heartedly taken.

(2) It is no better with what he calls " confirmation " of the dating of the Exodus. For the confirmation is Professor Garstang's dating of the fall of Jericho. The material on which Professor Garstang bases his theory is evidence, but the theory itself is not evidence, and cannot of itself " confirm " anything. Professor Albright says quite roundly " The views of Professor Garstang . . . are devoid of concrete archaeological foundation."[1] To cite Garstang's theory as " evidence " is a complete misuse of terms.

Mr. Lucas recognizes that all archaeologists do not share Garstang's theory, and cites Vincent and Albright as two who disagree with him. Instead, however, of refuting their criticisms, Mr. Lucas looks round for reasons for disqualifying them from being heard. This strange procedure hardly savours of scholarship. He sets them aside on the ground that neither of them are Egyptologists, whereas Garstang is an Egyptologist. To pretend that so eminent an authority on Palestinian archaeology as Vincent is not entitled to a hearing on a question of Palestinian archaeology, such as the interpretation of the excavations at Jericho, is patently absurd ; while to rule out, as no Egyptologist, Albright, the author of *The Vocalization of the Egyptian Syllabic Orthography*, is a surprisingly arbitrary procedure.

In point of fact, there is no dispute between Vincent, Albright and Garstang as to the archaeological facts relating to the Egyptian material found at Jericho. The interpretation of the facts is not a specifically Egyptological question, and the effort to exclude Vincent and Albright on such a ground is but testimony to the significance of their disagreement with

[1] BASOR, No. 74, April, 1939, p. 23.

Garstang's " apodictic statements," as Albright terms them,[1] of their professed definitive authority.

(3) It is to be observed that just as Mr. Lucas would simplify the problem by concentrating on one Biblical text to the exclusion of all others, and on one archaeological theory, to the exclusion of all others, so he concentrates on a single site to the neglect of all others. For Jericho is not the only Palestinian site to yield material relevant to the discussion of the question of the Exodus and the Settlement in Palestine. The evidence from Lachish, as Sparks has recently pointed out,[2] does not favour the theory that Mr. Lucas is advocating. The same may be said of the evidence from Beth-shan and Bethel, while the evidence from Ai provides a problem of its own, on any view of the date of the Exodus. With the exception of Ai, all of these places suffered a destruction, which is placed on archaeological grounds at the end of the thirteenth century B.C. It must, of course, be remembered that here again the conclusions based on the evidence are but theory, and that they cannot be treated as beyond question. But still more certainly they cannot be merely ignored, as if both the evidence and the conclusions based on it were of no moment for the discussion of the date of the Exodus. And if the conclusions are set aside, it can only be after adequate refutation by archaeological authorities.

Mr. Lucas raises two objections to the later dating of the Exodus: (1) the reference to Israel on the Israel stele of Merneptah, and (2) the assumption that it involves the entry into Egypt in the Hyksos period.

So far as the latter is concerned, it may be agreed that the Hyksos period is quite inappropriate for the entry into Egypt. For the Biblical account ascribes to the court which Joseph served a tenderness towards Egyptian susceptibilities which the Hyksos kings do not appear to have shown. Moreover, it is quite clearly implied in the account in Genesis that the land of Goshen was not in the neighbourhood of the Pharaoh's court in Joseph's time. While, therefore, the royal court at the time of the Exodus was found in the neighbourhood of Goshen,

[1] BASOR No. 74, April, 1939, p. 11.
[2] JTS xlii, 1941, pp. 178 f.

it was elsewhere in Joseph's time. It is known that the Hyksos, like Rameses II, had their seat in the Delta region, and that the Delta city which Rameses II rebuilt to be the second capital of his empire was none other than the capital city of the Hyksos. Hence, while the placing of the Exodus in the age of Rameses II and his successor would accord with this consideration, the placing of the descent into Egypt in the Hyksos age would be in conflict with the Biblical evidence. In fact, however, there is no necessity whatever to place the descent into Egypt four hundred and thirty years before the Exodus. For again the chronology of Ex. xii, 40 is in conflict with other Biblical evidence, and notably with the statement that Moses' mother was the sister of one of those who went down with Jacob into Egypt (cf. Ex. vi, 20, Gen. xlvi, 11).

Again, the evidence of the Israel stele leads to no simple conclusion. It is possible, as is not seldom claimed, that it implies that Israel was not yet a settled people ; it is equally possible that it refers to the Israel of a separate wave of immigration, other than that led by Joshua. Mr. Lucas locates the Israel of this stele in the region occupied by Judah. If this is correct, it is relevant to observe that many writers hold that Judah's entrance into the land was quite separate from the entry under Joshua. Against the view that that entry was much earlier than the time of Joshua, Mr. Lucas's objection falls.

The present writer a few years ago attempted a synthesis of all the known material.[1] So far as he is aware, his view does not conflict with any direct archaeological evidence, and while it is not in accord with the chronology of Ex. xii, 40 and 1 Kings vi, 1, it is in fuller accord with the Biblical traditions than most attempts to solve the problem. It was advanced with the clear recognition of the complexity of the issue, of which the writer was, and, is, very conscious. On his view, the descent into Egypt took place in the Amarna age, when the court was not in the Delta region. In the same age, as we learn from the Amarna letters, there was trouble in the south and in the north

[1] " Israel's Sojourn in Egypt," in *Rylands Bulletin*, XXII, 1938, and separately.

of Palestine. He regards the Ḫabiru of the south as a kindred group, but lately associated with those that went down into Egypt, and those in the north as a more distantly connected group. The southern group pressed as far north as Shechem, but failed to maintain themselves there, the section that thus failed being partly scattered and partly going down into Egypt to rejoin those from whom they had lately separated. After an interval in close accord with the genealogies of the Old Testament, the Exodus took place, after an oppression by Rameses II, who is known to have had a seat in the Delta region. The group that came out of Egypt entered Canaan under the leadership of Joshua via Jericho, and established itself principally in the Central Highlands.

This view accords most closely with Vincent's dating of the fall of Jericho. For Vincent dates it in the second half of the thirteenth century, or circa 1250 B.C. " si l'on veut."[1] It should be noted that on the view above outlined, there is no need to posit a long interval between the Exodus and the entry into Canaan. For it has long been noted that there are two traditions of the Wilderness period, one of which centres around Sinai, or Horeb, and the other of which centres around Kadesh, and since when the two traditions were combined the great bulk of the forty years of wandering was located at Kadesh, it would appear that it is the Kadesh tradition that claims the lengthy period. The Kadesh tradition is more probably associated with the entry from the south into Judah, an entry effected by Judahite clans, together with Kenites and others. The entry under Joshua of the later group, therefore, may well have followed the Exodus after a quite short interval. This means that whether the Israel stele is associated with the earlier wave or the later, it provides no real difficulty, though the present writer is much more inclined to associate it with the earlier wave. Against this view, therefore, neither of the above-mentioned objections of Mr. Lucas to the later dating of the Exodus lie.

[1] RB xliv, 1935, p. 602.

"THE ORIGINS OF HEBREW LAW"

By I. Rapaport

In a recent publication, dealing with early marriage custom in Israel, we find a statement that the *mohar*, the bride-price mentioned in the Old Testament, "was plainly a Canaanite institution."[1] The author supports this view, among others, by saying that the enactment in the Book of the Covenant referring to the *mohar* is "a typical example of the 'casuistically formulated' laws which Alt has shown to be of Canaanite origin."

It is not our intention here to deal with the implications of the statement on the *mohar*; what we intend, however, is to analyse briefly the theory of Prof. Alt on the Canaanite origin of the Book of the Covenant (BOC). In his book on the origins of Hebrew Law,[2] this scholar examines the legislative portions of OT and comes to the conclusion that the legal enactments can be grouped in two sections, each section differing from the other in spirit as well as in literary form.[3] The first section which is embodied in BOC[4] is described by Prof. Alt as containing the "casuistic," or case, law, and as having been adopted by the Israelites from the Canaanites. According to Prof. Alt, this section exhibits the following characteristics: the laws of which it is composed are invariably phrased in an objective way, that is, they always open with the formula "if a man," and the parties involved are always referred to in the third person; the laws are devoted to the regulation of secular legal cases, leaving out entirely cases connected with the

[1] Prof. M. Burrows, *The Basis of Israelite Marriage* (American Oriental Series, Vol. 15, 1938), p. 7.

[2] A. Alt, *Die Urspruenge des Israelitischen Rechts*, Leipzig, 1934.

[3] *Cf.* S. H. Hooke, *Archaeology and the Old Testament* (in H. W. Robinson, *Record and Revelation*, 1938), p. 368 f.

[4] Ex. *21*, 2–*22*, 16.

religious and ethical spheres of life ; the laws do not contain any references to such national or religious practices which could be regarded as " specifically Israelite." On the other hand, the second section which is scattered all over the Pentateuch[1] is described by Alt as containing the " apodeictic " law, and as having developed within Israel. The laws of this section open with various formulae, as, for instance, " thou shalt," " thou shalt not," and " he, who does so and so ; " they mostly deal with spheres of life connected with cult and ethics, and presuppose a cultural environment, in which secular and religious law were not yet—in distinction from the first section—separated from one another.

Contrary to what one would have expected, Prof. Alt hardly discusses the views of other scholars concerning this problem, although quite a few have written on it. He assumes that since the case law in BOC has no specific Israelite colouring, national or religious, it must consequently have originated in an environment different from that of the Israelites. " If, then, a step has to be made beyond the boundaries of Israel, then it is a precept of scientific caution to make it as short as possible, and to look for a home of the casuistic law, as adopted by Israel, not somewhere in far off places, such as among the peoples of eastern Mesopotamia or northern Asia Minor, whose law books of earlier times have fortunately been made known to us recently, but which (law books), in spite of all resemblance in form, and partly also in matter, display too many divergences to see in any one of them the direct prototype of the Israelite case law."[2] During the period of crystallization into a people—Prof. Alt proceeds—Israel had other and much closer neighbours, from whom it could and would have " learned in matters of law." These neighbours must have been the inhabitants of pre-Israelite Palestine, the Canaanites, from whom the Israelites, on their entry into the country, took over the secular law.

This is as much evidence as this scholar is able to offer in support of his theory, that the casuistic legislation in the Penta-

[1] E.g., Ex. *20*, 2–17 ; Lev. *18*, 7–17 ; Deut. *27*, 15–26.
[2] Alt, *op. cit.*, 25.

teuch, about two dozen enactments in all, originated in Canaan and was subsequently adopted by the Israelites.

But whereas speculation on the origins of an ancient institution, by the very fact of its being no more than mere speculation, cannot always be met wtih material objections, the situation becomes more precarious when that process of mental indulgence claims to be adorned with a façade, which, however, provides an easier target for assault. This is precisely the position of Prof. Alt's theory on the origins of the Hebrew case law. He does not arrive at it by way of any internal or external evidence, because no such evidence is available at present. We do not find in BOC anything that would point to the existence of an organized system of law in pre-Israelite Canaan which the Israelites, during the early stages of their settlement, might have adopted. Nor, indeed, do we possess any extra-biblical sources relating to Canaanite law.

The question, therefore, that naturally arises is whether in view of this one is justified in adopting Canaan—a country of whose ancient legal organization we know nothing—as the cradle of the Hebrew secular law.[1] Since, however, this question may not seem to preclude a positive answer, we propose to deal here with another and basically more important question : whether the casuistic law in BOC is really deprived of references to national or religious life which could be regarded as " spezifisch israelitisch."

A glance at the first enactment in BOC[2] immediately reveals that the particular law concerns itself with a member of the Hebrew community, who is sold into slavery. Consequently, the term *'ibrî*, עִבְרִי, provides an unequivocal indication as to the home of the law,[3] namely, amid the social and economic conditions of the Hebrew people. Prof. Alt, it is true, is aware of the difficulty caused by the presence of the

[1] *Cf.* the view of the eminent student of ancient history and culture, Eduard Meyer, *Geschichte des Altertums* (1931) II, 2, p. 316, that the Book of the Covenant is clearly a record of law which developed inside Israel.

[2] Ex. *21*, 2.

[3] *Cf.* Meyer, *op. cit.*, p. 317, n. 3, where it is suggested that the term here applies to the language by which the nationality, too, is indicated.

denotation *'ibrî* in the context. Instead, however, of adopting the more convenient way of removing it by excision, which, as will be seen below, he actually does elsewhere, he submits that *'ibrî* does not denote the national origin of the enslaved person. Moreover, he maintains, the term *'ibrî* is never used in OT as a connotation of genuine national consciousness of the Israelite people. When it occurs in the legal portions of the Scripture, he says, it is always connected with the process of enslavement,[1] and may be taken as descriptive of the social and legal status to which a man is reduced when he enters into a relationship of dependence. In other instances[2] the term is employed of Hebrews by, or in relation to, foreign people, and shows a touch of disparagement on the part of the first, and of inferiority on the part of the second category of speakers ; but never does it imply a feeling of national pride.[3] By interpreting *'ibrî* in this way, Prof. Alt attempts to remove from the case law in BOC an obstacle of no small evidential weight. Such an interpretation, however, of the term in question rests on a fallacious basis. A careful examination of all occurrences of *'ibrî* in OT[4] yields quite a different impression of its significance. When Jonah[5] replies to the captain of the sinking ship " I am an Hebrew," עִבְרִי אָנֹכִי, there is not the slightest trace of an " inferiority complex " in the reply of the fugitive prophet, even as there is not any in the reply " I am an Amalekite," עֲמָלֵקִי אָנֹכִי, of the man who confessed to have accelerated the end of the dying Saul.[6] Nor, indeed, does the captain, or the passengers on board, condemn Jonah on the ground of his race, and it is not until the prophet, under the pressure of a guilty conscience, has made the suggestion himself that he be removed from the vessel, that this is reluctantly done. Similar-

[1] Ex. *21*, 2 ; Deut. *15*, 12 ; Jer. *34*, 9.

[2] Gen. *14*, 13 ; *39*, 14 ; 17 ; Ex. *2*, 11 ; 13 ; Jon. *1*, 9.

[3] *Cf.* Alt, *op. cit.*, p. 19 ff., and notes.

[4] For the sake of clarity we restrict our investigation in this paragraph to the narrative portions of OT.

[5] Jon. *1*, 9.

[6] 2 Sam. *1*, 8 ; 13 ; *cf.* also 1 Sam. *30*, 13, where the reply אנכי נער מצרי is an innocent description of the speaker's ethnic origin, although he happens to be at the same time " a slave to an Amalekite."

ly, when the hostile Philistines say " Behold, the Hebrews come forth out of the caves," there can hardly be detected any contempt in the word *'ibrîm* which they use,[1] just as there is none in the words " The kings of the Hittites and the kings of the Egyptians," when expressed by the battling Aramaeans regarding the supposedly allied forces of the Israelites.[2] Finally, the apposition *'ibrî* in the phrase, " Abram, the Hebrew "[3] is undoubtedly as dignified a description of the Patriarch's racial stock as *'emôrî* in the phrase " Mamre, the Amorite " which appears three words later in the same verse.[4]

With this meaning of *'ibrî* at hand, one is justified in applying it to the legal portions of OT in which the term is also found,[5] there being no apparent reason to suppose that the same expression had two different meanings in, say, Deut. xv, 12 and Jon. i, 9. Furthermore, a careful examination of the relevant passages in the legislative portions of OT, relating to Hebrew slavery, shows that the term *'ibrî*, contrary to Prof. Alt's thesis, can have no other than an ethnic designation, the emphasis being laid in each case on the liberation of the slave who is an *'ibrî* at the end of six years servitude. This is particularly evident from the passage in Jeremiah.[6] The prophet passionately pleads for the liberation of every male or female slave being " an Hebrew or an Hebrewess," and he alternately replaces these two terms by social or national equivalents, such as " brother," " fellow " and " Jew." The underlying cause for stressing the element of Hebrew nationality in the laws of slavery was undoubtedly the desire of the lawgiver to differentiate between the native and the foreign slave ; a desire which Prof. Alt does not seem to realize when he says that the Israelite case law, just as the case law of other peoples of the ancient Orient, takes no account of the national status of the people for whom it is designed. In fact, however, both the

[1] 1 Sam. *14*, 11.

[2] 2 Kings *7*, 6.

[3] Gen. *14*, 13.

[4] Prof. Landsberger suggests that *'ibri* was a substitute for the lacking gentilic of " Israel," *cf.* Alt, *op. cit.* 21, 1.

[5] *Cf.* above note 10.

[6] *Cf.* recently Beer, *Exodus* (*Handbuch zum Alten Testament*, 1939), p. 107.

Israelite case law and the other ancient case laws do take account of the element of nationality. Apart from the Hittite law of whose national basis Prof. Alt is aware, we could refer to the case law of ancient Babylonia, which is contained in the Code of Hammurabi. It is precisely in the laws of slavery that the Babylonian legislation differentiates between the native, *mâr mâtim*, and the alien, *mâr mâtim šanîtim*.[1] Also the customary law from Arrapkha clearly points to an existent distinction between native and alien slaves. The documents of legal practice from that country[2] imply that native citizens could not be sold into slavery, but foreign people[3] who lived in the country could. It is evident, therefore, that the ancient Orient recognized the social difference between various nationalities in the eyes of the law, and this difference is accordingly emphasized in BOC by the term *'ibrî*, which incidentally also indicates the environment in which the law of Hebrew slavery was born.

Having shown that the very first law of BOC bears a distinct Israelite colouring, we could now safely turn to other parts of the biblical case law, where a similar colouring is visible. But before doing so we should like to say a few words about the Ḫabiru, in whose social status Prof. Alt finds a resemblance to that of the *'ibrî*. The term *amel ḫabîru* (=LÚ.ŠA.GAZ) is found in the cuneiform sources of Mesopotamia, Palestine and Egypt, coming from the end of the third millennium till the thirteenth century B.C. It was applied, as is borne out by the personal names, to a mixture of Semitic and non-Semitic peoples, who were responsible for the government of Egypt during the Hyksos period and for the troubled political conditions in Palestine and Syria during the El-Amarna period. In earlier centuries the Ḫabiru could be found as mercenaries in Asia Minor, and as residents in Babylonia

[1] CH 280–281 ; *cf.* also CH 117 which, like Ex. 21, 2 f., deals with the sale of freeborn people into slavery, but, unlike the biblical law, restricts the period of servitude to three years. It is inconceivable that this law should also have applied to aliens who were reduced to slavery in Babylonia.

[2] No legal code has come down to us from Arrapkha.

[3] These were Assyrians, Babylonians, Nullians and Habiru. For the last mentioned, *cf.* below.

where they were organized under a governor of their own, *akil ḫabîri*, just as the Amorites there were organized under an *akil ammuri*.[1] In one country, however, in Arrapkha of the fifteenth century B.C., do many Ḫabiru individuals " voluntarily cause themselves to enter into slavery," *lišânšu ana ardûti ušeribsu*. But this social phenomenon in Arrapkha does not mean that ^{amel}*ḫabîru* is a synonym of ^{amel}*ardu*, or that a Ḫabiru was generally a slave or vice versa, or even that there was any inherent social relationship between the ^{amel}*ḫabîru* and the ^{amel}*ardu*. Wherever they resided the Ḫabiru constituted a foreign element, and as such they sometimes rose to the position of ruling the country, e.g., in Egypt, and sometimes they " voluntarily " surrendered themselves into slavery, e.g., in Arrapkha. It is true that in the latter country the share of the Ḫabiru in the slave class must have been very prominent, not because this feature was inherent in the social constitution of the Ḫabiru, but only because, as was pointed out above, social custom in Arrapkha did not permit the citizens of the land to become slaves. Instead, the slave class had to be recruited from among foreigners, of whom the Ḫabiru provided a considerable proportion, as also did the foreign Nullians, and, to a smaller extent, also the Assyrians and the Babylonians. By the fifteenth century B.C., about six hundred years after the first appearance of the Ḫabiru-wanders on the historical arena, the term *ḫabîru* might already have developed an ethnic denotation ; but even if *ḫabîru* did not, there is certainly no likelihood that the biblical *'ibrî*—assuming that the two terms are identical—did not have that denotation, be it in Jer. xxxiv, 9, or in Ex. xxi, 2.

Two things, then, distinctly emerge from what has been said up till now, that neither *'ibrî* nor *ḫabîru* denote the " social and legal status into which a man is reduced when he decides to become a slave," and that *'ibrî* is decidedly an ethnic description, thus lending an ethnic background to, at any rate, the laws of slavery in BOC.

[1] For the problem of the Ḫabiru, *cf.* Speiser, *Ethnic Movements in the Near East in the Second Millennium*, 1932.

The next indication[1] of the original environment of the case law in BOC can be found in Ex. xxi, 6. It is the ceremony of boring the slave's ear, which is performed at a sanctuary and in the presence of judges. [2] The ceremony is at once a religious and legal act, designed to symbolize the entering of the Hebrew individual into perpetual slavery.[3] This symbolic practice is not found in any of the extant codes of the ancient Orient, and we are also ignorant of its familiarity to the pre-Israelite inhabitants of Canaan. On the other hand, we know that Israelite ritual was connected with door-post ceremonies.[4] The casuistic law of BOC, then, has a reference to religious custom which can be regarded as " spezifisch israelitisch." Occurring as it does in the laws of Hebrew slavery, it serves as a further corroboration of what has been inferred above from the term *'ibrî*.

Other references to Israelite religious custom in the casuistic law are found in Ex. xxii, vv. 7 and 8, and especially in v. 10, where the name of the Israelite deity is mentioned. Prof. Alt is aware of the difficulty arising out of these references and, apparently not being able to bring them into accord with his theory on the secular and non-Israelite character of BOC, he disposes of them by saying that v. 8 is a " secondary amplification,"[5] and that the name JHWH in v. 10 is a later " correction."[6] In addition to the obviously unjustifiable cutting out of the references in question,[7] we have the opinion of an OT scholar from Heidelberg, pronounced against Prof. Alt as recently as 1939. Prof. Beer in his " Handbuch zum Alten Testament "[8] maintains that the divine name in v. 10 cannot be secondary, since " it is precisely the oath of JHWH

[1] Most of our allowed space in this publication having been filled with the investigation of *'ibri*, the other points to be discussed here will necessarily have to be dealt with more briefly.

[2] *Cf.* Driver, *Deuteronomy*, p. 184.

[3] *Cf.* Beer, *op. cit.*, p. 108.

[4] E.g., Ex. *12*, 6 ; Deut. *6*, 9.

[5] Alt, p. 17, note 1.

[6] *Ibid.* pp. 17, 1, and 24, 1.

[7] *Cf.* S. A. Cook, *The Laws of Moses and the Code of Hammurabi*, p. 61.

[8] Exodus, p. 114.

that is best understood in the earliest relationships of JHWH towards the pastoral life."

All this seems to us to be sufficient evidence that the casuistic law does not lack that religious or national colouring which can establish the Israelite historical origin of the Book of the Covenant. We should, however, like to consider briefly yet one more point in Prof. Alt's theory, namely that the case law differs from the apodeictic law in that the first always has the introductory formula " if a man," while the second has various introductory formulae.[1] Since quite a few enactments in BOC have, in addition to the " if a man " formula, also other formulae, Prof. Alt, accordingly, either amends the text[2] or removes the stylistically non-conforming enactments from BOC to the apodeictic section. Here again the question may be raised whether differing literary form in a legal record, as BOC certainly is, justifies the severance of particular laws and their distribution into groups of differing origins. The Code of Hammurabi, *the* typical ancient record of case law, has a series of articles[3] apodeictically formulated, and the student would find it extremely difficult, if not altogether impossible, to assign them to a different source from that of most of the other articles. A similar series of articles apodeictically formulated is found in the Assyrian collection of laws,[4] and yet Driver and Miles are satisfied to leave them as integral parts of the Assyrian case law.[5] Prof. Alt, however, does divide BOC according to the phraseology of its introductory formulae, and one instance, at least, of that process may be mentioned here because it shows how far that scholar is inclined to sacrifice matter at the expense of form. By an amazing twist of interpretation, he comes to the conclusion that the legal spirit underlying the law in Ex. xxi, 22, is different from that of the *jus talionis* in Ex. xxi, 23 ff. Consequently, from the

[1] *Cf.* above p. 1 f.

[2] *Cf.* Ex. *21*, 2, where Alt emends כִּי תִקְנֶה עֶבֶד עִבְרִי into כִּי יִמְכֹּר אִישׁ עִבְרִי, thus obtaining the required " if a man " opening.

[3] CH 26 ; 38–40.

[4] *Cf.* Driver-Miles, *The Assyrian Laws*, p. 406, art. 40, consisting of several sub-divisions, and p. 424, arts. 57–59.

[5] *Ibid.*, p. 126 f.

literary and material points of view alike, these two laws must belong to two different sources. And since Ex. xxi, 22, opening with the " if a man " formula, is part of the casuistic law which the Israelites took over from the Canaanites, hence it follows that the *jus talionis* in Ex. xxi, 23 ff., must be regarded as " spezifisch israelitisch."[1] Such reasoning is obviously contrary to historical fact of the universality of the *talio* principle[2] in the ancient Semitic East.

[1] Alt, p. 36.
[2] *Cf.* also Beer, *op. cit.*, p. 111.

THE STORY OF JERICHO

Further Light on the Biblical Narrative

Revision in the dating of certain types of pottery from Beisan, as proposed by Dr. Albright and accepted in principle by the excavators of that site, Mr. Rowe and Mr. FitzGerald,[1] calls for a correlation of results elsewhere including Jericho. Here it involves in chief a class of painted wares decorated in monochrome or shaded duochrome with linear or triangular devices,[2] which was formerly assigned to the first half of the Late Bronze Age but is now ascribed to the second half of that Period, from the time of the Pharaoh Seti I (*c.* 1320 B.C.) into the next century.

Personally I have been perplexed from the first by the differences in style and execution between these wares (and the common pottery associated with them), and the established types of the fifteenth century B.C., the Age of Thothmes III, well illustrated, for example, by the excavations of Megiddo.[3] The evidence from Beisan, however, which grouped them all within the same culture period (L.B.I.) seemed to be generally accepted. My misgivings were revived in 1939 by a further study of the Jericho materials with a view to a final publication of our results, hitherto confined to progress-reports and occasional articles in the *P.E.F.Q.S.*—a project again unhappily deferred by circumstances. With the specimens in question thus clearly in mind, though without access to my notes and records at the time of writing, I have no hesitation in accepting the proposed revision in principle, and add a few lines on its further implications in the Story of Jericho.

[1] *ASOR* XVII, 86. *P.E.F.Q.S.*, 1940, p. 81. Four Canaanite Temples, p. ix.

[2] *P.E.F.Q.S.*, April, 1935 ; pl. I and p. 68, and Liv. AAA. XXI ; pl. XXXIX.

[3] *Shipton :* Notes on the Megiddo Pottery ; Strata VIII and IX.

These wares were found by us in considerable quantity upon the small mound overlooking the spring in clear association with the Middle Building, a structure so named because it stood in apparent isolation, stratified between the so-called Hilani above and the older Palace store-rooms below.[1] In previous excavations Dr. Watzinger had also found specimens on the same spot. His last-minute excavation of the Hilani had penetrated to its foundations, which were exceptionally deep in proportion to its massive character, and so disclosed some underlying walls of the Middle Building, as shown in his published plan.[2] His personal records, which he kindly communicated to me in reply to my enquiries, left no doubt that he had also reached in places and probed the upper levels of the Palace store-rooms. Thus is explained the problem of certain fragments which fitted together though found by us in separate portions of the Middle Building.[3] Notwithstanding the traces of disturbance, the evidence is clear that the specimens under consideration were associated with the Middle Building; and my recent re-examination of the materials, which include a number of "tell-tale" fragments, confirms this conclusion. A few specimens of the same kind were found also, both by myself and Dr. Watzinger, at the north end of the site, outside the limits of the Fourth City. Ours came from a group of rooms against the Hyksos defensive parapet—and it was with interest I noted that I had in fact dated them at the time to L.B.II.[4] So far as I am aware none of this distinctive pottery was found by either expedition elsewhere on this site. Certainly none was found in association with the main walls of City IV, and none was found in any of the tombs. The evidence for dating the occupation and destruction of the Fourth City remains thus unchanged by this revision: the Middle Building is simply lifted out of the period when that city was in being.

Though as a result of this revision, the Middle Building

[1] *Story of Jericho*, Figs. 3 and 4.
[2] Jericho : Taf. IV.
[3] *Liv. AAA.*, XXI, pl. XXXIX and p. 103.
[4] *P.E.F.Q.S.*, 1931, p. 106.

cannot have been the Residence of the last Kings of Jericho,[1] as the indications and criteria led us to suppose at the time of its discovery, a re-interpretation of the evidence in the light now available discloses a possibility of high interest. Our excavations, logically interpreted ,point to the fall of the City in the reign of Amenhetep III (*c.* B.C. 1400), possibly late in his reign, which is well represented, but before that of his successor Akhenaton, of whose period there is no trace—no Royal Signet, no influx of early Mykenaean pottery—nor do we find any mention of Jericho in the Amarna Letters. But we have recognised traces of a partial and intermittent occupation of the Site, with a few intrusive burials in the tombs, during the five hundred years that the City itself lay in ruins. To these traces must now be added the Middle Building.

Looking at the plan of this structure we find certain curious features : though clearly a residence, for it had both hearth and oven, one long room in the main block was like a stable, and it was also provided with its own stout enclosing wall which was placed noticeably askew from the old lines of the City. What can this strange intrusion signify ? To what alien occupier can it be attributed, who secured for his dwelling the most favoured position on the Site, but made apparently no use of the tombs ? The Bible itself provides the answer. In Judges iii, 10/14, we read :

"... The Lord strengthened Eglon the King of Moab against Israel.... And he gathered unto him the children of Ammon and of Amalek. Ane he went and smote Israel, and they possessed the City of Palm Trees. And the children of Israel served Eglon the King of Moab eighteen years."

The approximate date of this episode is not difficult to compute, if we accept as basis the date of the fall of Jericho. This, according to Biblical tradition, would fall about 1400 B.C. or just before, a result in very close agreement with that of our excavations, which we have seen point to 1400 B.C. or just

[1] The old caption to the photograph of this building in *The Story of Jericho*, pl. XVI a, requires amendment in this respect. So also does the opening paragraph on p. 118 which reflects the disturbance described. It is the earlier type of painted fabrics that is found in TC. 5. (*Liv. AAA.*, pp. 146-7).

later. Both sources point indeed to the same reign, and the central figure of 1400 is the nearest approximation to the date that evidence can support. With this as basis, the date of the Oppression by Eglon would fall wholly or mostly within the reign of Seti I,[1] the very period to which archaeologists now ascribe the incidence of the pottery we have discussed above. That this Pharaoh did repress disturbances in the Jordan Valley is known independently from an inscription discovered at Beisan ; and that the disturbances extended further south is recorded in the Egyptian archives of his reign :

" The vanquished Shasu (Bedouin) plan rebellion : their tribal chiefs are gathered together, rising against the Asiatics of Southern Palestine (Kharu). . . and they disobey the laws of the Palace."

It is instructive to compare closely the text of this historical record with that of the Biblical episode previously quoted. The parellelism is complete and obvious ; amplification would be superfluous. The critics and scholars who have revised the dating of Late Bronze age pottery have also restored a fragment of Bible narrative to its rightful place in history.

JOHN GARSTANG.

[1] *Cf.* Joshua : Judges (*Foundations of Bible History*), p. 344.

CORRESPONDENCE

School House,
Shrewsbury Road,
Birkenhead,
29th September, 1941.

SIR,

Your July number contained two articles of considerable interest.

In an article on "The Rainfall of Palestine" the author states several important points. Many members of the British Expeditionary Force of 1917–18, especially those fighting in the hills north and south of Jerusalem, have every reason to remember the former and the latter rains. During the heavy rains of December, January and February the infantry rarely had any shelter, and had to sleep under the sole protection of a ground sheet. Impenetrable mists often rolled over the hills during the day, causing the front line to exercise an equal vigilance over the whole twenty-four hours. In 1918 the heavy rains continued till the very end of March, and it was with a sigh of deep relief that the troops welcomed the latter rains of April which, after the former rains, were simply ordinary showers.

In his discussion on the effect of height on rain the author tells us that in general the rainfall increases with the height, and mentions "that the central mountain ridge of Palestine reaches a height of 3,000 feet, a few miles north of Ramallah, and here we find a rainfall of more than 32 inches. Further south still at Hebron, at about the same height, the fall is 24 inches." Actually the figure 3,747 feet is generally quoted for Juttah, just south of Hebron, and then, descending to the north, there is again a summit of 3,318 feet at Tel-Asur (said to be the old Baal-Hazor) north of Ramallah.

It is of interest to remember that the capture of the commanding height of Tel-Asur by the British occurred in an

operation starting at 2 a.m. on 9th March, 1918. Happily for a couple of days there was no rain, but the former rains started with undiminished vigour on 11th March. My own laconic note records " Fight continues ; rain at night, no coat, shelter or blankets." I suspect the rain once started went on, as was its custom in those hills, for at least a week until an easterly wind drove it away.

In the article on "The Date of the Exodus" the author sums up a good deal that has been written during recent years. Many seem now to accept an approximate date of 1400 B.C. for the fall of Jericho. The accession of Solomon seems to have occurred in 970 B.C. If this is so, the period from the fall of Jericho to the time of Samuel and Saul must have been 300 to 400 years. The isolated episodes of the book of Judges throw but scanty light on it. It seems strange that so little has been written about the development of the Hebrews during this long period. How was it they preserved their nationality and their customs ? Has not the time come for an article on these lines ?

Yours faithfully,
W. F. BUSHELL.

Birkenhead School.

NOTICES OF PUBLICATIONS

The Committee have to acknowledge with thanks the following :

Antiquaries Journal, July, 1941.
Expository Times, July and August, 1941.
Religions, July, 1941.
Journal of the Royal Society of Antiquaries of Ireland, Vol. LXXXI, Part II.
Scottish Geographical Magazine, June, 1941.
American Journal of Archaeology, April-June, 1941.
American Journal of Semitic Languages and Literature, July, 1941.
Bible Lands, April and July, 1941.
The Jewish Quarterly Review, April, 1941.
Report of the United States National Museum, 1940.
The Harvard Theological Review, July, 1941.
Quarterly of the Department of Antiquities in Palestine, Vol. IX, Nos. 2, 3, 4.

Bound this in as book

PALESTINE EXPLORATION FUND

ANNUAL REPORT

AND ACCOUNTS

WITH

LIST OF SUBSCRIPTIONS

FOR THE YEAR 1941

PALESTINE EXPLORATION FUND
2 HINDE STREET, MANCHESTER SQUARE, LONDON, W.1

THE PALESTINE EXPLORATION FUND

A SOCIETY FOR THE ACCURATE AND SYSTEMATIC INVESTIGATION OF THE ARCHAEOLOGY, THE TOPOGRAPHY, THE GEOLOGY AND PHYSICAL GEOGRAPHY, THE MANNERS AND CUSTOMS OF THE HOLY LAND, FOR BIBLICAL ILLUSTRATION.

FOUNDED 1865.

PATRON—HIS MAJESTY THE KING.

PRESIDENT—HIS GRACE THE ARCHBISHOP OF CANTERBURY.

VICE-PRESIDENT—HIS GRACE THE ARCHBISHOP OF YORK.

The Society was established on the basis of the following rules :—

1. It was not to be a religious society. That is to say, it should be pledged not to advocate or attack any form of creed or doctrine.
2. It was not to adopt or to defend any side in controversial matters.
3. It was to be conducted on strictly scientific principles.

These rules have been jealously observed. The Society's organ, the PALESTINE EXPOLRATION QUARTERLY, is open to all opinions, while it records as facts only the actual discoveries and results of its exploring officers. Although the Society is not a religious society, strictly so called, its work necessarily possesses unusual interest for Bible Students of all denominations, who find in the results obtained by exploration much that confirms and illustrates the historical truth of both the Old and New Testaments. In the course of its existence, the Society, with limited funds at its disposal, has done an immense amount of work, and published the results in books, papers, maps, plans and photographs, primarily for the benefit of its subscribers, and for the advantage of students of the Sacred Scriptures.

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Auditors—MESSRS. TURQUAND, YOUNGS, MCAULIFFE AND CO., *Chartered Accountants*, 19 Coleman Street, London, E.C.2.

The privileges of Subscribers are as follows :—Annual Subscribers of *One Guinea* (£1 : 1 : 0), or more, will receive the PALESTINE EXPLORATION QUARTERLY, and can purchase other publications of the Fund and of the British School of Archaeology in Jerusalem at reduced prices. Annual Subscribers of not less than *Two Guineas* (£2 : 2 : 0) to either the Palestine Exploration Fund, or the British School of Archaeology in Jerusalem, or of One Guinea to each, will receive the QUARTERLY and the Memoirs and Annuals of both institutions as published, gratis.

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Subscribers in the United States of America may remit to the National City Bank, 55 Wall Street, New York, with instruction to credit Messrs. Coutts & Co., for Palestine Exploration Fund.

PALESTINE EXPLORATION FUND

ANNUAL REPORT FOR THE YEAR 1941

THE Fund, in common with similar societies, continues to suffer financially. The income from subscriptions has fallen and, on the other hand, it is difficult to reduce expenditure to the same extent, and it has, therefore, been found necessary to sell out some of our recent investment. As a temporary measure the *Quarterly* will only be issued twice in the year. The services of the Assistant Secretary will shortly be set free as regards half his time.

It is realized that the present is a difficult period in which to seek for new subscribers, yet it is thought that there must be some non-subscribers whose interest in the archaeology of Palestine is sufficient to induce them to join as subscribers to the Fund. The Committee of the Fund would again draw the attention of subscribers to the "Covenant" scheme, under which, income tax paid by them in respect of their subscriptions can be repaid to the Fund, without loss to themselves. A form enabling this to be done will willingly be sent to any subscriber who asks for it.

In response to an appeal from the Egypt Exploration Society, to the Committee of the Fund, the rent of the rooms of the former Society at No. 2 Hinde Street has been reduced by £50 a year.

It will be noted in the attached statement of Receipts and Payments, for 1941, that special expenses connected with the war, such as War Damage Insurance, amounted to more than £100 during the year.

The Committee much regret to announce the death, on 11th April, 1942, of Brigadier-General E. M. P. Stewart of Coll. He had served for many years on the Committee, and was regular in his attendance until he succeeded to the ownership of the Isle of Coll, and resided there. After this his visits to London were necessarily few. He was a valued colleague and the Committee much deplore his loss.

The Committee are glad to report that at the last Annual General Meeting of the Fund the Right Revd. Paul Fulerand de Labillière, Dean of Westminster, was elected on to the Committee and accepted the nomination. Miss Olga Tufnell was also elected to the Committee and accepted election.

It is hoped that the next volume describing the results of the excavations at Samaria will be published during 1942.

The Committee desire to express their thanks to the contributors of articles and reviews to the *Palestine Exploration Quarterly*, especially to Professor Sidney Smith, Mr. C. F. A. Schaeffer, Mr. W. Ross, Mr. D. W. Thomas, Dr. David Diringer, Mr. George E. Kirk, Mr. G. M. FitzGerald, Mr. J. W. Crowfoot and Mrs. Crowfoot, Mr. A. Lucas, Mr. A. M. Hyamson, Fr. C. Lattey, Professor H. H. Rowley, Mr. I. Rapaport, Professor J. Garstang, and Mr. W. F. Bushell.

Signed on behalf of the Executive Committee, 17th April, 1942,

C. F. ARDEN-CLOSE, *Chairman.*
C. B. MORTLOCK, *Hon. Secretary.*

PALESTINE EXPLORATION FUND

BALANCE SHEET 31st DECEMBER, 1941

Liabilities.	£ s. d.	£ s. d.
Capital :—		
Authorised—200 Shares of £1 each	200 0 0	
Issued—10 Shares of £1 each—not called		—
Sundry Creditors for Current Expenses		109 11 2
Surplus of Assets over Liabilities (Excluding donated property) as per last Balance Sheet	1,846 14 1	
Add : Surplus of Income over Expenditure for the year	631 17 11	
		2,478 12 0
Bank Overdraft		68 9 5
Note : £25 donated in 1939 for the purchase of Committee Table in memory of the late H. Coote Lake, Esq., has not yet been expended		
		£2,656 12 7

Assets.	£ s. d.
Freehold Property—Donated—No. 2 Hinde Street (Estimated value £5,000)	—
Alterations and Improvements No. 2 Hinde Street as per last Balance Sheet	1,188 17 5
Museum, Library and Store-room, Fixtures, Fittings, Furniture, etc., as per last Balance Sheet	382 2 7
Jewish Colonial Trust—Donated—50 Ordinary Shares of £1 each, fully paid	—
Stock of Publications, Maps, Books, Models, Lantern Slides, Library, Antiques, etc.	—
Sundry Debtors	0 10 9
Subscriptions in Arrear	33 12 0
£1,000 3 per cent. Defence Bonds	1,000 0 0
£50 3 per cent. Savings Bonds, 1955-65 (P.O. Issue)	50 0 0
Cash in Hand	1 9 10
	£2,656 12 7

C. F. Arden-Close, *Chairman.*
A. M. Hyamson, *Hon. Treasurer.*

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31st DECEMBER, 1941

RECEIPTS.	£	s.	d.
To Balance—31st December, 1940	312	15	6
,, Subscriptions and Donations, including Local Societies	420	9	8
,, Sale of Publications	31	17	7
,, Rent	212	10	0
,, Legacy bequeathed by the late Miss Alice Anne White	1,000	0	0
,, Dividend on £1,000 3 per cent. Defence Bonds	7	17	9
,, ,, ,, £50 3 per cent. Saving Bonds		10	6
,, Covenanted Subscriptions. Repayment of Income Tax	38	17	4
,, Bank Overdraft 31st December, 1941	68	9	5
,, Petty Cash Overdraft	3	15	10
	72	5	3
Less : Subscriptions in hand ...	5	5	8
	66	19	7
	£2,091	17	11

PAYMENTS.	£	s.	d.
By Printing, including QUARTERLY (4 nos.), Annual Report, Postage and Despatch	265	15	6
,, Editor's fee (5 quarters)	62	10	0
,, *Samaria-Sebaste*, Blocks for Vs. I and III ...	122	6	11
,, Repairs and Maintenance	2	4	6
,, Salaries and Wages	419	12	10
,, Postages and Telephone	21	2	3
,, Fire Insurances	5	8	0
,, Water Rate, etc.	9	18	7
,, Lighting and Heating	4	0	0
,, Stationery and Sundries	4	14	4
,, Audit Fee	5	5	0
,, Cheque books		8	0
,, Interest on Bank Overdraft		12	6
,, Purchase of £1,000 3 per cent. Defence Bonds	1,000	0	0
,, Purchase of £50 3 per cent. Savings Bonds, 1955-65	50	0	0
Expenses arising directly out of the state of war :			
War Damage Contribution ... 22 13 6			
War Damage Insurances ... 34 15 0			
Group Fireguard Contribution 28 0 0			
A.R.P. Protective Measures to premises 24 17 6			
War Damage Repairs (under claim) 7 13 6			
	117	19	6
	£2,091	17	11

	£	s.	d.
Receipts for year, as shown above	1,712	2	10
Less : Arrears of last year's subscriptions, etc., received during 1941	65	17	8
	1,646	5	2
Add : Arrears at 31st December, 1941, as shown by Balance Sheet	34	2	9
	£1,680	7	11

	£	s.	d.
Payments for year, as shown above	2,091	17	11
Less : Creditors at 31st December, 1940, paid during 1941	102	19	1
	1,988	18	10
Add : Creditors at 31st December, 1941, as shown by Balance Sheet	109	11	2
	2,098	10	0
Less : Money expended in purchase of Securities	1,050	0	0
	1,048	10	0
Surplus of Income over Expenditure	631	17	11
	£1,680	7	11

Auditor's Report to the Members of the Palestine Exploration Fund.

We report that we have obtained all the information and explanations we have required as Auditors. We have examined and compared the above Balance Sheet and the Receipts and Payments Account with the books and vouchers of the Fund, and, in our opinion, they are properly drawn up so as to exhibit a true and correct view of the state of the affairs of the Fund, according to the best of our information and the explanations given to us and as shewn by the books of the Fund.

19 Coleman Street,
London, E.C.2.
28*th April*, 1942

Turquand, Youngs, McAuliffe & Co.,
Chartered Accountants.

LIST OF SUBSCRIPTIONS AND DONATION

RECEIVED BETWEEN JANUARY 1ST AND DECEMBER 31ST, 1941, INCLUSIVE.

*** If any omission or mistake be observed in the following lists, the Secret will be very glad to be informed of it, and will rectify the error in the n Annual Report.

	£	s.	d.
Adler, E. N., Esq.	0	10	6
Alford, Miss M.	1	1	0
Arden-Close, Sir Charles ...	2	2	0
Armitage, Robert, Esq. ...	2	2	0
Ashcroft, Miss D.	1	1	0
Ashmole, Prof. B.	1	1	0
Barham, S. P., Esq. ...	2	2	0
Barnett, Mrs. H. A. Lake ...	2	2	0
Barnett, R. D., Esq. ...	1	1	0
Barrois, Rev. A. G. ...	1	3	10
Barron, Mrs.	1	1	0
Bate, Miss D. M.	1	1	0
Bayley, Arthur R., Esq. ...	2	2	0
Beasley, Walter, Esq. ...	2	2	0
Becke, Major A. F. ...	1	1	0
Belmore, The Earl of ...	1	1	0
Bentwich, Prof. N. ...	1	1	0
Birnbaum, Dr. S.	1	1	0
Blair, Dr. D. P.	1	1	0
Blyth, Miss Estelle	1	1	0
Bonney, H. V., Esq. ...	1	1	0
Boulton, W. H., Esq. ...	1	1	0
Brakenrig, S. W., Esq. ...	1	1	0
Bramwell, W., Esq. ...	1	1	0
Bristow, Ernest, Esq. ...	1	1	0
Brown, James, Esq., Jr. ...	2	2	0
Bugbee, Dr. Lucius ...	1	4	3
Burdon, Rev. R. J. ...	1	1	0
Bushell, W. F., Esq. ...	1	1	0
Cairns, Rev. Dr. W. T. ...	0	10	6
Carter, John, Esq.	3	3	0
Caullie, Lt.-Col. A. G. ...	1	1	0
Cerny, Rev. E. A.	1	1	0
Chalmers-Hunt, D. R., Esq.	1	1	0
Clarke, Col. N. P.	1	1	0
Crawford, L., Esq.	1	1	0
Crowfoot, J. W., Esq. ...	1	1	0
Curwen, B. H., Esq. ...	1	16	6
Curwen, Dr. E. Cecil ...	1	1	0
Curwen, Dr. Elliot	2	2	0
Daiches, Dr. S.	2	2	0
Davies, Miss A. M. ...	1	1	0
Deacon, J. F. W., Esq. ...	2	2	0
Deedes, Maj. H. G. ...	1	1	0
Dirk Pons & Co., Messrs. ...	1	1	0
Dixon, Rev. H. L.	1	1	0
Du Boulay, Brig.Gen. W. H.	1	1	0
Dugmore, Rev. C. W. ...	2	2	0
Edwards, Rev. A. H. ...	1	1	0
Edwards, W. C., Esq. ...	1	1	0
Elsdon, Miss S. M.	1	1	0
Evans, E. M. P., Esq. ...	1	1	0
Falconer, Harold, Esq. ...	1	1	0
Carried forward	£69	6	7

	£	s.
Brought forward	69	6
Finn, Miss C. M.	1	1
FitzGerald, G. M., Esq. ...	2	2
Fleming, A., Esq.	2	0
Fothergill, Dr. Claud ...	1	1
Fraser, C. J., Esq.	4	4
Fremlin, Frank, Esq. ...	1	0
Freshfield, the Misses ...	1	1
Gamble, Rev. H. J. ...	1	1
Gardiner, Dr. A. H. ...	2	2
Garner, Rev. H.	1	1
Garnett, Rev. T. A. ...	1	1
Garstang, Prof. J.	2	2
Gentle-Cackett, Rev. S. W.	1	1
Gerstley, Mrs.	1	1
Gibson, D., Esq.	1	0
Gibson, Mrs.	4	4
Gilbert, F. C., Esq. ...	1	1
Goadby, Dr. F. M.	1	1
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Goodenough, Admiral Sir W.	1	1
Gurney, Oliver, Esq. ...	1	1
Gurney, Mrs. Robert ...	3	0
Hammond, Col. F. S. ...	2	2
Hay, Major A. E.	1	1
Haycraft, Lady	1	1
Healy, Archdn. W. ...	1	1
Heath, Rev. Alban ...	2	2
Hertz, Very Rev. J. H. ...	1	1
Hippisley, Miss E.	1	1
Hollis, Miss E.	1	1
Hollis, Rev. Dr. F. J. ...	1	1
Hooke, Prof. S. H.	1	1
Hutton, Rev. W. R. ...	1	4
H. W. J.	1	0
Hyamson, A. M., Esq. ...	1	1
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Ingholt, Prof. H.	2	1
Jack, Rev. Dr. J. W. ...	1	1
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Jones, Rev. Canon R. C. S.	1	1
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Kenyon, Miss K. M. ...	1	1
Kenyon, Sir Frederic ...	2	2
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Kirkness, W. E., Esq. ...	2	2
de Knevett, E., Esq. ...	1	1
Kraeling, Prof. E. G. ...	1	3
Laidlay, Mrs. A. E. ...	2	0
La Page, John, Esq. ...	1	1
Lee, Rev. E. J.	0	10
Lees, G. M., Esq.	1	1
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Aberdeen University ...	1	1	0
Adelaide Public Library	2	2	0
Allegheny College ...	0	10	6
Alleyns School	1	11	6
Alma College	1	1	0
Ambrose-Swasey Library	1	1	0
American Congregational Assocn.	2	2	0
American Philosophical Society	1	1	0
American Schools of Oriental Research ...	12	6	8
American University, Beirut	1	1	0
Amherst College	1	1	0
Armagh Library	1	1	0
Ashland College	1	1	0
Ashmolean Museum ...	1	1	0
Bangor Theol. Seminary	1	3	9
Berkeley Bap. Div. School	1	1	0
Birmingham Public Libraries	1	1	0
Boston Public Library ...	1	1	0
Bradford City Library ...	0	10	6
British Columbia, Union College of	1	1	0
Brooklyn Inst. of Arts and Sciences	1	1	0
Brown University ...	1	1	0
Bucknell Library ...	1	1	0
Cairo Service des Antiquites	1	1	0
California University ...	0	10	6
Cambridge Museum of Archaeology and Ethnology	5	0	0
Carnegie Library, Pittsburg	0	10	6
Cone Memorial Y.M.C.A.	1	0	4
Cornell University ...	1	1	0
Davidson College ...	1	1	0
Doshisha Theol. School. ...	1	1	0
Duke University	1	1	0
Durham University ...	2	2	0
Edinburgh University ...	6	6	0
Gravesend County School for Boys	1	1	0
Harvard College	1	1	0
Haverford College ...	1	1	0
Heythrop College ...	1	1	0
Illinois University ...	1	1	0
Istanbul University ...	1	1	0
Jewish Institute of Religion	1	0	0
Jewish Theol. Seminary	1	1	0
Jews College	0	10	6
John Rylands Library ...	1	1	0
Leeds Library	1	1	0
Leeds University ...	1	1	0
London University ...	1	1	0
Los Angeles Public Lib.	1	1	0
McGill University ...	1	1	0
McMaster University ...	1	1	0
Manchester Coll., Oxford	3	3	0
Mansfield College ...	1	1	0
Mary Baldwin College ...	1	1	0
Metropolitan Museum of Art	1	1	0
Michigan University ...	2	1	6
Carried forward	£226	7	3

	£	s.	d.
Brought forward	226	7	3
Mount Hoylake College ...	1	1	0
Nashota House Library	1	1	0
Newcastle-upon-Tyne Library	2	2	0
New College, London ...	1	1	0
New York Public Library	1	1	0
Newberry Library ...	1	0	6
N. Wales, University Coll. of	1	1	0
Northwestern University	1	1	0
Oberlin College	1	1	0
Ottawa Parliament Liby.	1	1	0
Palestine Govt., Chief Secretary	1	1	0
Peabody Institute ...	1	1	0
Pittsburg-Xenia Univ. ...	2	2	0
Pretoria University ...	0	12	7
Princeton Theol. Seminary	3	3	0
Princeton University ...	2	1	6
Royal Asiatic Society ...	1	1	0
St. Andrew's University	1	1	0
St. Augustine's College, Canterbury	1	1	0
St. Deniol's Library ...	1	10	0
St. Edmund's, Ware ...	1	1	0
St. Louis Public Library	1	1	0
St. Mary's College, Kansas	2	2	0
St. Patrick's, Maynooth	0	10	6
Seabury-Western Theol. Seminary	2	1	5
Seventh Day Adventist Seminary	2	2	0
Smith College	1	3	8
So. Baptist Theol. Seminary	1	1	0
Spence Library	1	1	0
Toronto, Victoria Univ. ...	1	1	0
Union Theol. Seminary ...	1	1	0
Vanderbelt University ...	2	2	0
Victoria (Aust.) Public Library	1	1	0
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Lindsay, H. D. R., Esq. ...	1	1	0
Lloyd, Rev. C. W. R. ...	1	1	0
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Carried forward	£301	13	2

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Tervit, Adam, Esq. ...	1	1	0
Thompson, H. A., Esq. ...	4	4	0
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New College Library ...	1	1	0
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McInnes, Mrs.	1	1	0
O'Connor, J. A., Esq. ...	2	2	0
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Shaw, H. B. Kennedy, Esq.	1	1	0
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Glasgow	18	18	0
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